Access DB# _____

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Alton Pryor Examiner #.: 74458 Date: 3/12/03
Art Unit: _____ Phone Number 30 8-4691 Serial Number: 09/840,820
Mail Box and Bldg/Room Location: _____ Results Format Preferred (circle): PAPER DISK E-MAIL

If mor than one search is submitted, please prioritize searches in order of need.

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Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Method for Controlling Flies

Inventors (please provide full names): Miura

Earliest Priority Filing Date: _____

For Sequence Searches Only *Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Search claim 2

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STAFF USE ONLY	Type of Search		Vendors and cost where applicable	
Searcher: Shaporame	NA Sequence (#)		STN	
Searcher Phone #: 308-4499	AA Sequence (#)		Dialog	
Searcher Location:	Structure (#)		Questel/Orbit	
Date Searcher Picked Up:	Bibliographic		Dr.Link	
Date Completed: 3/13/03	Litigation		Lexis/Nexis	
Searcher Prep & Review Time:	Fulltext		Sequence Systems	
Clerical Prep Time:	Patent Family		WWW/Internet	
Online Time:	Other		Other (specify)	

PTO-1590 (8-01)

(FILE 'HOME' ENTERED AT 14:15:27 ON 13 MAR 2003)

FILE 'CAPLUS, USPATFULL' ENTERED AT 14:15:47 ON 13 MAR 2003

L1	1725	S	IMIDACLOPRID
L2	72776	S	ACETYLCHOLINE OR ACETYL CHOLINE
L3	169	S	L1 AND L2
L4	129	S	L1 (P) L2
L5	123	S	RECEPTOR (P) L4
L6	39410	S	NICOTINIC
L7	102	S	L5 (P) L6
L8	5785	S	ACETYLCHOLINE (2A) RECEPTOR (2A) NICOTINIC (2A) RECEPTOR
L9	120	S	L8 AND L1
L10	99	S	L8 (P) L1
L11	24	S	L8 (3A) L1
L12	6	S	INSECT (P) L11

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FILE 'HCAPLUS' ENTERED AT 15:17:58 ON 13 MAR 2003
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FILE COVERS 1907 - 13 Mar 2003  VOL 138 ISS 11
FILE LAST UPDATED: 12 Mar 2003  (20030312/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


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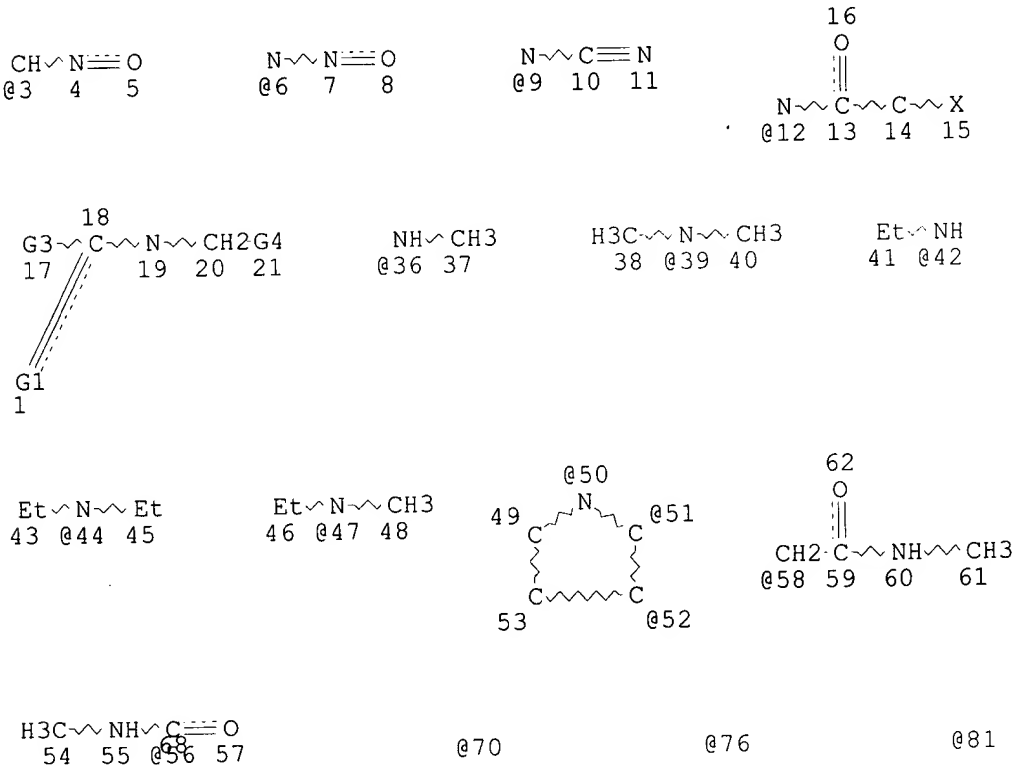

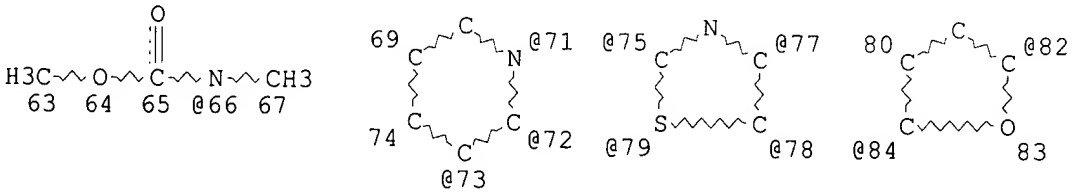

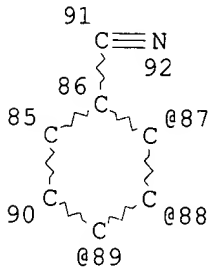

Page 2-A
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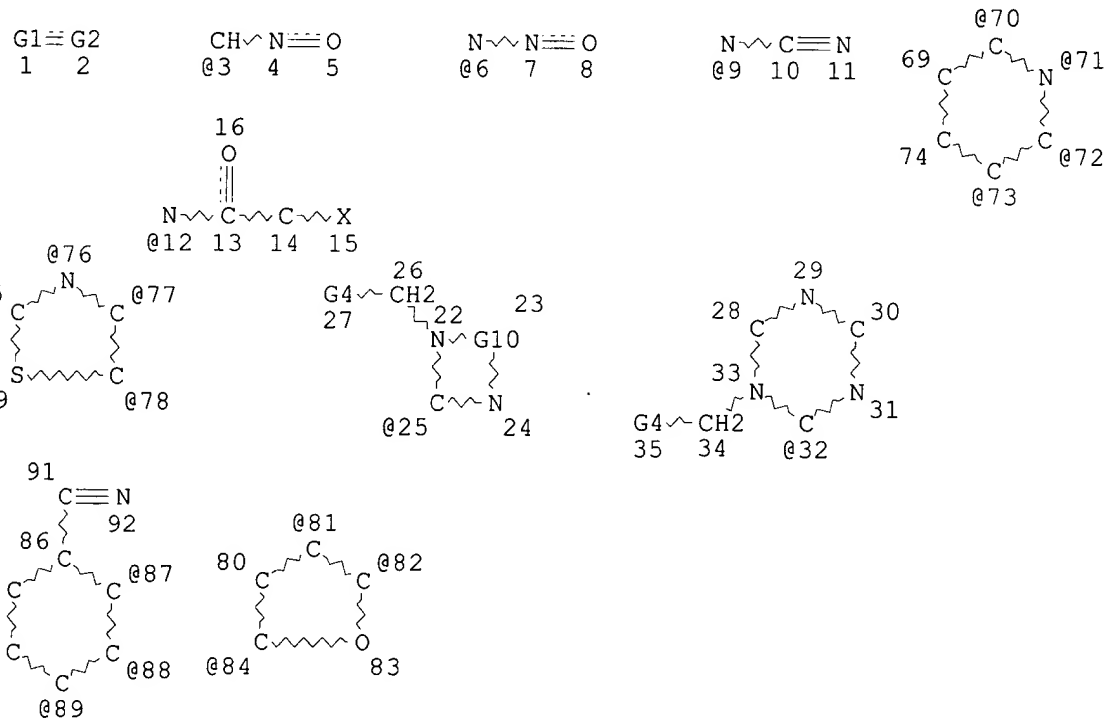
L9 STR



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NUMBER OF NODES IS 54

STEREO ATTRIBUTES: NONE
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L13 1574 SEA FILE=HCAPLUS ABB=ON PLU=ON L12
L14 44 SEA FILE=HCAPLUS ABB=ON PLU=ON L13 AND (FLY OR FLIES)

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L14 ANSWER 1 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2003:123061 HCAPLUS
DOCUMENT NUMBER: 138:149056
TITLE: Cyclic sheet-type insect control agents
INVENTOR(S): Nakajima, Mika; Tsuchiya, Terumi
PATENT ASSIGNEE(S): Yuko Chemical Industries Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003047384	A2	20030218	JP 2001-240468	20010808

PRIORITY APPLN. INFO.: JP 2001-240468 20010808
AB The agents contain volatile insecticides and nonvolatile insecticides dispersed in cyclic ring-shaped resin sheets which can be split at .gtoreq.1 position in the circumferential direction to be placed on soil around plants. A compn. contg. empenthrin 5, pyriproxyfen 2, imidacloprid 0.5, and EVA 92.5 wt.% was injection-molded to give a cyclic sheet, which strongly inhibited the growth of phorid **flies**.
IT **138261-41-3**, Imidacloprid **150824-47-8**, Nitenpyram
165252-70-0, Dinotefuran
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(cyclic ring-shaped resin sheets contg. both volatile and nonvolatile insecticides)

L14 ANSWER 2 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:550759 HCAPLUS
DOCUMENT NUMBER: 137:258815
TITLE: Simple solid dose bioassay for insecticides using the fruit **fly**
AUTHOR(S): Grant, R.
CORPORATE SOURCE: Department of Biology, University of York, York, YO10 5DD, UK
SOURCE: Bulletin of Environmental Contamination and Toxicology

(2002), 69(1), 35-40
CODEN: BECTA6; ISSN: 0007-4861
PUBLISHER: Springer-Verlag New York Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A simple bioassay was designed by using a food solid contg. insecticide where the primary exposure route would be by feeding. The Drosophila melanogaster stocks were bred and kept at 25.degree. on bottles contg. std. fruit **fly** food mixt. Ry506 wild type **flies** were used as a wild type genus and then used throughout to keep continuity. 44.61 ML of water, 0.75 g tech. agar and 5 g sucrose were microwaved together until boiling. Exposure of fruit **flies** to low doses of known insecticides in their diet caused a response that is dose dependent. The fruit **flies** spent their time at the top of the bioassay tube unless feeding, a behavior seen with all chems. and controls. This solid exposure bioassay is an alternative to other direct toxicity bioassays, with a particular propensity to insecticides that have a feeding route of expression.

IT **138261-41-3**, Imidacloprid
RL: ANT (Analyte); ANST (Analytical study)
(simple solid dose bioassay using Drosophila, for)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 3 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:886546 HCAPLUS
DOCUMENT NUMBER: 136:17687
TITLE: Method of screening for negative cross resistance
INVENTOR(S): Pittendrigh, Barry Robert; Murdock, Larry Lee; Gaffney, Patrick Joseph
PATENT ASSIGNEE(S): Purdue Research Foundation, USA
SOURCE: PCT Int. Appl., 53 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001092561	A2	20011206	WO 2001-US18062	20010601
WO 2001092561	A3	20021003		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1287352	A2	20030305	EP 2001-941896	20010601

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRIORITY APPLN. INFO.: US 2000-209058P P 20000602
WO 2001-US18062 W 20010601

AB A method of evaluating the efficacy of mols. against a target population including a strain resistant to a first toxin includes detg. a susceptible strain in the target population and selecting for the resistant strain in the target population. The susceptible strain being susceptible to the first toxin and the resistant strain being resistant to the first toxin. The method further includes evaluating the efficacy of the resistant strain with a plurality of mols. to det. a second toxin that is more toxic

to the resistant strain than to the susceptible strain, evaluating the efficacy of a heterozygous strain of the target population with sep. applications of the first toxin and the second toxin, and assigning a priority rating to the second toxin if the sep. applications of the first toxin and the second toxin are at least as toxic to the heterozygous strain as to the susceptible strain. A test was conducted using an initial screen of DDT and 8 pyrethroids against Canton-S (DDT-susceptible **flies**) and paratsl (DDT resistant **flies**). Deltamethrin and permethrin were more toxic to resistant **flies** than to susceptible **flies**. Heterozygotes were tested with deltamethrin or DDT or both. DDT and deltamethrin combined effectively to kill the heterozygotes and it was detd. that these two are neg. cross resistance factors.

IT **138261-41-3**, Imidacloprid
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(method of screening for neg. cross resistance)

L14 ANSWER 4 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:801672 HCAPLUS
DOCUMENT NUMBER: 136:33301
TITLE: Comparison of neonicotinoid insecticides for use with biodegradable and wooden spheres for control of key Rhagoletis species (Diptera: Tephritidae)
AUTHOR(S): Stelinski, Lukasz L.; Liburd, Oscar E.; Wright, Starker; Prokopy, Ronald J.; Behle, Robert; McGuire, Michael R.
CORPORATE SOURCE: Department of Entomology, Center for Integrated Plant Systems, Michigan State University, East Lansing, MI, 48824, USA
SOURCE: Journal of Economic Entomology (2001), 94(5), 1142-1150
CODEN: JEENAI; ISSN: 0022-0493
PUBLISHER: Entomological Society of America
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Field-based studies and lab. bioassays were conducted with apple maggot, Rhagoletis pomonella (Walsh), and blueberry maggot, Rhagoletis mendax Curran, **flies** to investigate the performance and duration of activity of insecticide-treated biodegradable and wooden spheres for control of Rhagoletis species. Four neonicotinoid insecticide treatments including imidacloprid, thiamethoxam, and thiacloprid at 2% (AI) were evaluated with biodegradable spheres. In 1999, significantly more apple maggot **flies** were found killed by imidacloprid-treated spheres compared with thiamethoxam-treated spheres during early and late season. In 2000, spheres treated with either of two formulations of imidacloprid killed significantly more apple maggot **flies** compared with thiamethoxam, thiocloprid, and untreated spheres. In blueberries, there were no significant differences between the nos. of blueberry maggot **flies** killed by both imidacloprid-treated or thiamethoxam-treated spheres in 1999. However, during the 2000 blueberry field season, both formulations of imidacloprid were significantly more effective in killing blueberry maggot **flies** compared with spheres treated with thiamethoxam, thiocloprid and untreated controls. Spheres treated with thiacloprid were ineffective and did not kill significantly more apple maggot or blueberry maggot **flies** compared with the controls. Lab. bioassays showed that the effectiveness of field-exposed spheres treated with imidacloprid at 4 and 8% (AI) and thiamethoxam at 4% (AI) in killing apple maggot **flies** was not significantly reduced over a 12-wk aging period. Wooden spheres aged outdoors for 12 wk with and without mold maintained residual activity in lab. tests, whereas biodegradable spheres of equal aging, with and without mold lost their effectiveness in killing apple maggot **flies**. In other studies,

we confirmed that the addn. of an external feeding stimulant (sucrose) significantly increases the effectiveness of both biodegradable and wooden spheres treated with imidacloprid at 2% (AI).

IT **138261-41-3**, Imidacloprid
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(neonicotinoid insecticides for use with biodegradable and wooden spheres for control of Rhagoletis in apple)

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 5 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:796229 HCAPLUS
DOCUMENT NUMBER: 135:299975
TITLE: **Fly** control using compounds with affinity to nicotinic acetylcholine receptors
INVENTOR(S): Miura, Hiroyuki; Akayama, Atsuo
PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd., Japan
SOURCE: Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1149532	A1	20011031	EP 2001-109715	20010420
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001302408	A2	20011031	JP 2000-131562	20000426
US 2001046986	A1	20011129	US 2001-840820	20010425

PRIORITY APPLN. INFO.: JP 2000-131562 A 20000426
OTHER SOURCE(S): MARPAT 135:299975
AB **Flies** are controlled in livestock pens and poultry houses using compds. with affinity to nicotinic acetylcholine receptors. The compds. (Markush given) are clothianidin, nitenpyram, imidacloprid, thiacloprid, acetamiprid, thiamethoxam and dinotefuran.
IT **138261-41-3**, Imidacloprid **150824-47-8**, Nitenpyram **160430-64-8**, Acetamiprid **165252-70-0**, Dinotefuran **210880-92-5**, Clothianidin
RL: AGR (Agricultural use); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(**fly** control using compds. with affinity to nicotinic acetylcholine receptors)
REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 6 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:729116 HCAPLUS
DOCUMENT NUMBER: 136:16690
TITLE: Photoaffinity labeling of insect nicotinic acetylcholine receptors with a novel [3H]azidoneonicotinoid
AUTHOR(S): Tomizawa, Motohiro; Wen, Zhimou; Chin, Hsiao-Ling; Morimoto, Hiromi; Kayser, Hartmut; Casida, John E.
CORPORATE SOURCE: Environmental Chemistry and Toxicology Laboratory, Department of Environmental Science, Policy and Management, University of California, Berkeley, CA, 94720-3112, USA
SOURCE: Journal of Neurochemistry (2001), 78(6), 1359-1366
CODEN: JONRA9; ISSN: 0022-3042
PUBLISHER: Blackwell Science Ltd.
DOCUMENT TYPE: Journal

LANGUAGE: English

AB The nicotinic acetylcholine receptor (nAChR) is a ligand-gated ion channel in the insect CNS and a target for major insecticides. The authors use photoaffinity labeling to approach the functional architecture of insect nAChRs. Two candidate 5-azido-6-chloropyridin-3-yl photoaffinity probes are evaluated for their receptor potencies: azidoneonicotinoid (AzNN) with an acyclic nitroguanidine moiety, and azidodehydrothiacloprid. Compared to their non-azido parents, both probes are of decreased potencies at Drosophila (fruit **fly**) and Musca (housefly) receptors but AzNN retains full potency at the Myzus (aphid) receptor. [3H]AzNN was therefore radiosynthesized at high specific activity (84 Ci/mmol) as a novel photoaffinity probe. [3H]AzNN binds to a single high-affinity site in Myzus that is competitively inhibited by imidacloprid and nicotine and further characterized as to its pharmacol. profile with various nicotinic ligands. [3H]AzNN photoaffinity labeling of Myzus and Homalodisca (leafhopper) detects a single radiolabeled peak in each case displaceable with imidacloprid and nicotine and with mol. masses corresponding to .apprx.45 and .apprx.56 kDa, resp. The photoaffinity-labeled receptor in both Drosophila and Musca has imidacloprid- and nicotine-sensitive profiles and migrates at .apprx.66 kDa. These photoaffinity-labeled polypeptides are considered to be the insecticide-binding subunits of native insect nAChRs.

IT **379258-98-7P**
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(photoaffinity labeling of insect nicotinic acetylcholine receptors with)

IT **131748-47-5 138261-41-3**, Imidacloprid **160430-64-8**, Acetamiprid **321845-09-4**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(photoaffinity labeling of insect nicotinic acetylcholine receptors with novel {[3H]azidoneonicotinoid})

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 7 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:720922 HCAPLUS
DOCUMENT NUMBER: 135:340462
TITLE: Evaluation of various deployment strategies of imidacloprid-treated spheres in highbush blueberries for control of Rhagoletis mendax (Diptera: Tephritidae)
AUTHOR(S): Stelinski, Lukasz L.; Liburd, Oscar E.
CORPORATE SOURCE: Department of Entomology, Michigan State University, East Lansing, MI, 48824, USA
SOURCE: Journal of Economic Entomology (2001), 94(4), 905-910
CODEN: JEENAI; ISSN: 0022-0493
PUBLISHER: Entomological Society of America
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Biodegradable, ammonium-baited spheres treated with the neonicotinoid insecticide Provado (imidacloprid) at 2% (AI) were evaluated for controlling blueberry maggot **flies**, Rhagoletis mendax Curran. Three strategies for sphere deployment in highbush blueberries, Vaccinium corymbosum L., were compared with untreated control plots in 1999 and once again compared against control plots and organophosphate insecticide sprays in 2000. The patterns of sphere deployment were as follows: (1) perimeter deployment in which spheres were hung individually and spaced equally around the perimeter of exptl. plots; (2) cluster deployment in which four groups of three spheres were hung in equally spaced perimeter locations of exptl. plots; and (3) uniform deployment in which spheres were placed 10 m apart (in a grid-like pattern) within exptl. plots. In

1999, there were no significant differences in fruit injury levels based on obsd. R. mendax oviposition scars and reared larvae among plots contg. imidacloprid-treated spheres in perimeter, cluster, and internal-grid patterns. However, all plots contg. spheres had significantly lower fruit infestation levels (<2%), compared with unsprayed control plots with no spheres deployed, which had infestation levels (>20%). In 2000, there were no significant differences in fruit injury based on obsd. R. mendax oviposition scars between plots contg. imidacloprid-treated spheres in the three deployment strategies tested and plots that received Guthion (Azinphos-methyl) spray applications. However, significantly fewer R. mendax larvae were reared from berries collected from plots that received two applications of Guthion compared with plots in which imidacloprid-treated spheres were deployed. Irresp. of sphere deployment strategies, all sphere-treated and sprayed plots had significantly lower injury levels (<1.5%), based on nos. of reared larvae compared with berries collected from the control plots (>4.0%). Based on captures of **flies** on unbaited Pherocon AM boards placed in the center of treatment plots, we obsd. a suppression of R. mendax in plots contg. imidacloprid-treated spheres compared with control plots. The potential of using imidacloprid-treated spheres as a behavioral control integrated pest management tactic for blueberry maggot **flies** is discussed.

IT **138261-41-3**, Provado
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(ammonium-baited imidacloprid-treated spheres in highbush blueberries for control of Rhagoletis mendax)

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 8 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:681653 HCAPLUS
DOCUMENT NUMBER: 135:206915
TITLE: Environmentally friendly insecticide for controlling cabbage moth and American **fly**
INVENTOR(S): Zhang, Yesheng
PATENT ASSIGNEE(S): Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 4 pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1292218	A	20010425	CN 2000-131616	20001015

PRIORITY APPLN. INFO.: CN 2000-131616 20001015

AB The pesticide comprises hexaflumuron 0.2-5, abamectin 0.1-4 or acetamiprid 0.2-5, emulsifier 2-25, penetrating agent or/and synergist 0-20, and addnl. solvent to 100%. The pesticide is highly efficient in controlling cabbage moth and American **fly** in cotton, fruit and vegetable field.

IT **160430-64-8**, Acetamiprid **357410-86-7**
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(environmentally friendly insecticide for controlling cabbage moth and American **fly**)

L14 ANSWER 9 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:311299 HCAPLUS
DOCUMENT NUMBER: 134:362727
TITLE: Filmcoating the seed of leek with fipronil to control onion thrips, onion **fly** and leek moth
AUTHOR(S): Ester, A.; Huiting, H. F.
CORPORATE SOURCE: Applied Research for Arable Farming and Field

Production of Vegetables, Lelystad, 8200 AK, Neth.
SOURCE: BCPC Symposium Proceedings (2001), 76(Seed Treatment), 159-166
CODEN: BSPRFW
PUBLISHER: British Crop Protection Council
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Research was conducted on the effect of seed filmcoating of winter leek (Allium porrum L.) with fipronil and some other insecticides on onion thrips, onion **fly** and leek moth. Trials were carried out in 1994, 1995 and 1996. Seeds film-coated with fipronil and imidacloprid showed effective control of thrips on the seedbed for twelve weeks and three weeks after transplanting. Diflubenzuron and methiocarb were not effective. Film-coating the seeds with fipronil, diflubenzuron, imidacloprid and teflubenzuron gave acceptable control of the larvae of the onion **fly**, whereas coating with benfuracarb and methiocarb was only moderately effective. The use of fipronil and imidacloprid film-coated seeds, resulted in sufficient protection against the leek moth, at low populations densities. The most effective insecticide, fipronil, was not phytotoxic.
IT **138261-41-3**, Imidacloprid
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(filmcoating of leek seed against onion thrips, onion **fly** and leek moth)
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 10 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:129602 HCAPLUS
DOCUMENT NUMBER: 134:262285
TITLE: Evaluation of non-organophosphorus insecticides for controlling the cabbage root **fly**. The insecticide conundrum
AUTHOR(S): Jukes, Andrew A.; Collier, Rosemary H.; Finch, Stan
CORPORATE SOURCE: Department of Entomological Sciences, Horticulture Research International, Wellesbourne, Warwick, CV35 9EF, UK
SOURCE: Mededelingen - Faculteit Landbouwkundige en Toegepaste Biologische Wetenschappen (Universiteit Gent) (2000), 65(2a), 167-173
CODEN: MFLBER; ISSN: 1373-7503
PUBLISHER: Universiteit Gent, Faculteit Landbouwkundige en Toegepaste Biologische Wetenschappen
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The need to find non-organophosphorus insecticides to control the cabbage root **fly** has never been so urgent. Of the six non-OP insecticides tested, fipronil was the most effective but cyromazine also showed promise. The other effective compd., carbofuran, is being withdrawn from use in the UK. Imidacloprid extended the period of development of the **fly** larvae and so should not be used, as it increased crop damage. Similarly, all three pyrethroid compds. tested, the soil-active tefluthrin and the two foliar-active compds. lambda-cyhalothrin and deltamethrin, did not kill larvae/adults of the cabbage root **fly** but appeared to kill beneficial organisms, as crop damage following such treatments was higher than on the untreated plants. One conundrum is that even if effective non-OP insecticides can be found, the chem. manufacturers may not support such insecticides being applied to minor crops such as vegetable brassicas.
IT **138261-41-3**, Imidacloprid
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)

(non-organophosphorus insecticides for controlling cabbage root **fly**)
REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 11 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:5876 HCAPLUS
DOCUMENT NUMBER: 134:143255
TITLE: Control of sciarid **fly**, Bradysia paupera, in ornamental plant propagation
AUTHOR(S): Buxton, J. H.
CORPORATE SOURCE: ADAS Rosemaund, Hereford, HR1 3PG, UK
SOURCE: BCPC Conference--Pests & Diseases (2000), (Vol. 1), 315-320
CODEN: BCDCAE
PUBLISHER: British Crop Protection Council
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The use of insecticides to control damage by larvae of sciarid **flies** to cuttings of poinsettia, Euphorbia pulcherrima was evaluated under com. glasshouse conditions at two sites. Damage was significantly reduced by the incorporation of chlorpyrifos granules or imidacloprid granules into the plug before sticking. Both these treatments gave a significant increase in fresh foliage wt. and dry plug wt. compared with untreated plugs. The level of sciarid **fly** activity increased during the season with sequential sticking of cuttings, but control from these insecticides was still maintained over a period of approx. a month. The type of plug also had an effect upon the incidence of sciarid **fly**. When no insecticide was incorporated into the compost, significantly more **flies** emerged from paper pots than from glue plugs, where a polymer was used to bind the compost together.
IT **138261-41-3**, Imidacloprid
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(control of Bradysia paupera in ornamental plant propagation with)
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 12 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:903046 HCAPLUS
DOCUMENT NUMBER: 134:127250
TITLE: Evaluation of some insecticidal formulations against major insect pests (Melangromyza sojae Zehnt. and Bemisia tabaci Genn.) of soybean
AUTHOR(S): Siddiqui, K. H.; Trimohan
CORPORATE SOURCE: Division of Entomology, Indian Agricultural Research Institute, New Delhi, 110 012, India
SOURCE: Shashpa (2000), 7(2), 167-170
CODEN: SHASF2; ISSN: 0971-4979
PUBLISHER: Shaspa Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Efficacy of different insecticidal formulations, viz, granules of carbofuran 3G (30 kg/ha), phorate 10G (10 kg/ha) applied in furrows at the time of sowing; carbosulfan 25 DS (30 g/kg seed), thiamethoxam 70 WS (3 and 5 g/kg seed), chlorpyriphos 20 EC (4 mL/kg seed) as seed treatment, and chlorpyriphos 20 EC (0.04%), thiamethoxam 25 WG (100 g/ha), and imidacloprid 17.8 SL (100 mL/ha) as foliar spray was evaluated in the field against natural incidence of major insect pests of soybean, viz, stemfly, Melanagromyza sojae (Zehnt.) and whitefly, Bemisia tabaci Genn. during 1998 and 1999 seasons. Seed treatment with thiamethoxam 70 WS (3.0 g/kg seed) was very effective continuously for two years in controlling the stemfly infestation and yellow mosaic virus (YMV) disease incidence transmitted by white **fly** resulting in significant increase in

grain yield. Prior to this no other insecticide was found so effective in controlling YMV disease to such a low level (rating 2.3 and 2.2 in 1998 and 1999 resp. as against 5.0 to 7.7 in other insecticidal treatments and untreated control) as in the case of thiamethoxam 70 WS.

IT **138261-41-3**, Imidacloprid
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(insecticidal formulations against Melangromyza sojae and Bemisia tabaci in soybean contg.)

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 13 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:751514 HCAPLUS
DOCUMENT NUMBER: 134:14285
TITLE: Effectiveness of thiamethoxam-coated spheres against blueberry maggot **flies** (Diptera: Tephritidae)
AUTHOR(S): Ayyappath, Ramesh; Polavarapu, Sridhar; McGuire, Michael R.
CORPORATE SOURCE: Blueberry and Cranberry Research & Extension Center, Rutgers University, Chatsworth, NJ, 08019, USA
SOURCE: Journal of Economic Entomology (2000), 93(5), 1473-1479
CODEN: JEENAI; ISSN: 0022-0493
PUBLISHER: Entomological Society of America
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Studies were conducted to evaluate the mortality of blueberry maggot, Rhagoletis mendax Curran, **flies** exposed to thiamethoxam- and imidacloprid-coated biodegradable (8-cm-diam.) red spheres, under both lab. and field conditions. Lab. studies with spheres coated with 0.1-2.0% (AI) of thiamethoxam indicated that they are effective against R. mendax; however, no dose-dependent response was obsd. trap. Studies on the effect of visitation time on thiamethoxam-coated spheres showed a decrease in R. mendax mortality as the duration of visitation time decreased from 60 to 10 s. Under field conditions, significantly more **flies** were captured on Plexiglas panes below the 2% (AI) thiamethoxam-coated spheres when compared with similar panes below untreated spheres. In field evaluations of thiamethoxam- and imidacloprid-coated spheres, imidacloprid-coated spheres (2.0% [AI]) were found to be significantly more effective than thiamethoxam-coated spheres (0.5-4.0% [AI]). Field trials to characterize the levels of mortality assocd. with aging pesticide-coated spheres revealed that the effectiveness of treated spheres decreased with increasing age of sphere, and this redn. in effectiveness is greater in thiamethoxam-coated spheres than in imidacloprid-coated spheres. These results provide comparative data on the effectiveness of thiamethoxam- and imidacloprid-coated spheres and support the potential of using pesticide-treated spheres for control of blueberry maggot **flies**.

IT **138261-41-3**, Imidacloprid
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(effectiveness of insecticide-coated spheres against blueberry maggot **flies**)

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 14 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:717014 HCAPLUS
DOCUMENT NUMBER: 134:1567
TITLE: Post-alighting responses of Mexican fruit **flies** (Dipt., Tephritidae) to different

insecticides in paint on attractive spheres
AUTHOR(S): Prokopy, R. J.; Jacome, I.; Pinero, J.; Guillen, L.; Fleischer, F. Diaz; Hu, X.; Aluja, M.
CORPORATE SOURCE: Department of Entomology, University of Massachusetts, Amherst, USA
SOURCE: Journal of Applied Entomology (2000), 124(5-6), 239-244
CODEN: JOAEEB; ISSN: 0931-2048
PUBLISHER: Blackwell Wissenschafts-Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Two new, comparatively safe insecticides (spinosad and imidacloprid) were compared with dimethoate (each at 1.5% active ingredient) for behavioral and mortality effects on Mexican fruit **flies**, Anastrepha ludens. Insecticide was mixed with sugar (as a feeding stimulant) and yellow latex paint (as an extending agent) applied to the surface of fruit-mimicking biodegradable 7 cm spheres made of sugar, flour and glycerin. **Flies** feeding on spinosad-treated spheres did not differ from **flies** feeding on untreated spheres in post-feeding intra-tree flight capability, amt. of oviposition or mortality. **Flies** that fed on imidacloprid- or dimethoate-treated spheres for as little as 30 s experienced both high redn. in oviposition and high mortality compared with **flies** that fed on untreated spheres, and the **flies** from imidacloprid-treated spheres also showed a much reduced intra-tree flight capability. If baited with attractive odor, biodegradable yellow spheres treated with a surface coating of imidacloprid in latex paint and sugar could have potential for suppressing Mexican fruit **flies** on host trees.
IT **138261-41-3**, Imidacloprid)
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(effect on behavior and mortality of Mexican fruit **flies**)
REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 15 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:683443 HCAPLUS
DOCUMENT NUMBER: 133:330889
TITLE: Insecticide resistance and cross-resistance in the house **fly** (Diptera: Muscidae)
AUTHOR(S): Liu, Nannan; Yue, Xin
CORPORATE SOURCE: Department of Entomology and Plant Pathology, Auburn University, Auburn, AL, 36849-5413, USA
SOURCE: Journal of Economic Entomology (2000), 93(4), 1269-1275
CODEN: JEENAI; ISSN: 0022-0493
PUBLISHER: Entomological Society of America
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A house **fly** strain, ALHF, was collected from a poultry farm in Alabama after a control failure with permethrin, and further selected in the lab. with permethrin for five generations. The level of resistance to permethrin in ALHF was increased rapidly from an initial 260-fold to 1,800-fold after selection. Incomplete suppression of permethrin resistance by piperonyl butoxide (PBO) and S,S,S,-tributylphosphorotrithioate (DEF) reveals that P 450 monooxygenase- and hydrolase-mediated detoxication, and one or more addnl. mechanisms are involved in resistance to permethrin. The ALHF strain showed a great ability to develop resistance or cross-resistance to different insecticides within and outside the pyrethroid group including some relatively new insecticides. Resistance to beta-cypermethrin, cypermethrin, deltamethrin, and propoxur (2,400-4,200-, 10,000-, and

>290-fold, resp., compared with a susceptible strain, aabys) in ALHF house **flies** was partially or mostly suppressed by PBO and DEF, indicating that P 450 monooxygenases and hydrolases are involved in resistance to these insecticides. Partial redn. in resistance with PBO and DEF implies that multiresistance mechanisms are responsible for resistance. Fifteen- and more than fourfold resistance and cross-resistance to chlorpyrifos and imidacloprid, resp., were not effected by PBO or DEF, indicating that P 450 monooxygenases and hydrolases are not involved in resistance to these two insecticides. Forty-nine-fold cross-resistance to fipronil was mostly suppressed by PBO and DEF, revealing that monooxygenases are a major mechanism of cross-resistance to fipronil. Multiresistance mechanisms in the ALHF house **fly** strain, however, do not confer cross-resistance to spinosad, a novel insecticide derived from the bacterium Saccharopolyspora spinosa. Thus, we propose that spinosad be used as a potential insecticide against house **fly** pests, esp. resistant **flies**.

IT **138261-41-3**, Imidacloprid
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(resistance in house **fly** to)

REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 16 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:666543 HCAPLUS
DOCUMENT NUMBER: 133:248390
TITLE: Synergistic insecticidal compositions containing a neuronal sodium channel antagonist and another insecticide
INVENTOR(S): Treacy, Michael Frank; Borysewicz, Raymond Frank; Schwinghammer, Kurt Allen; Rensner, Paul Erich; Oloumi-Sadeghi, Hassan
PATENT ASSIGNEE(S): American Cyanamid Company, USA
SOURCE: PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000054591	A2	20000921	WO 2000-US5879	20000307
WO 2000054591	A3	20010118		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
BR 2000008930	A	20011218	BR 2000-8930	20000307
EP 1198170	A2	20020424	EP 2000-914839	20000307
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
US 6479543	B1	20021112	US 2000-521987	20000309
US 2002177597	A1	20021128	US 2002-145784	20020516

PRIORITY APPLN. INFO.: US 1999-124306P P 19990312
US 1999-158201P P 19991007

WO 2000-US5879 W 20000307
US 2000-521987 A3 20000309
OTHER SOURCE(S): MARPAT 133:248390
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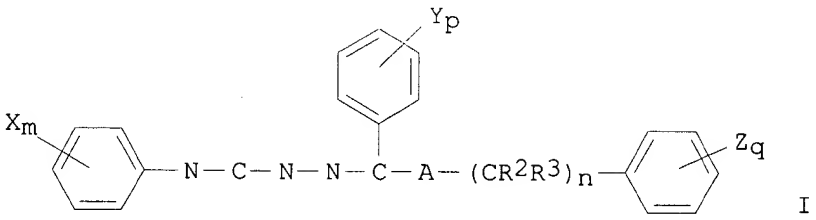

I

AB A synergistic insecticidal compn. comprises a neuronal sodium channel antagonist such as I (X, Y, Z = H, halo, OH, CN, NO2, alkyl, etc.; W = O or S; m, p, q = 1, 2, 3, 4, or 5; n = 0, 1, or 2; R, R1, R2, R3 = alkyl) in combination with one or more pyrethroids, pyrethroid-type compds., recombinant nucleopolyhedroviruses expressing an insect toxin, organophosphates, carbamates, formamidines, macrocyclic lactones, amidinohydrazones, GABA antagonists and acetylcholine receptor ligands.

IT **138261-41-3D**, Imidacloprid, mixt. with neuronal sodium channel antagonist **150824-47-8D**, Nitenpyram, mixt. with neuronal sodium channel antagonist **160430-64-8D**, Acetamiprid, mixt. with neuronal sodium channel antagonist
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(in synergistic insecticidal compn.)

L14 ANSWER 17 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:573347 HCAPLUS
DOCUMENT NUMBER: 133:248354
TITLE: Toxicity and residual effectiveness of insecticides on insecticide-treated spheres for controlling females of Rhagoletis pomonella (Diptera: Tephritidae)
AUTHOR(S): Hu, X. P.; Prokopy, R. J.; Clark, J. M.
CORPORATE SOURCE: Department of Entomology, University of Massachusetts, Amherst, MA, 01003, USA
SOURCE: Journal of Economic Entomology (2000), 93(2), 403-411
CODEN: JEENAI; ISSN: 0022-0493
PUBLISHER: Entomological Society of America
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The toxicity of five tech.-grade insecticides of four different classes to apple maggot females, Rhagoletis pomonella (Walsh), following a 10-min exposure period in insecticide-coated glass jars, with or without a feeding stimulant (sucrose) present was evaluated. According to LC90 values for toxicity by ingestion and tarsal contact, imidacloprid was 1.5 times more toxic than dimethoate or abamectin, diazinon was less toxic, and phloxine B (a photoxic dye) least toxic. Based on LC90 values for tarsal contact alone, dimethoate was 2.3, 4.0, and 18.4 times more toxic than imidacloprid, abamectin, and diazinon, resp. Contact alone with phloxine B caused no mortality. When exposure was assessed using spheres coated with a latex paint mixt. contg. sucrose and formulated dimethoate (Digon 400 EC) or imidacloprid (Provado 1.6 F) at concns. ranging from 5 to 70 g (AI)/cm2, both insecticides showed reduced effectiveness compared with toxicities from glass jar tests, with Digon two times more toxic than Provado. After exposure to artificial rainfall and retreatment with sucrose, Digon- and Provado-treated spheres exhibited greatest residual effectiveness, with diazinon-treated spheres less effective. Spheres treated with formulated abamectin (Agri-Mek 0.15 EC) at 1.0% (AI)

performed only slightly better than phloxine B-treated spheres, which completely lost effectiveness after exposure to rainfall. Spheres treated with formulated imidacloprid (Merit 75 WP) at 1.5% (AI) showed equal or better residual efficacy in killing apple maggot **flies** (>80% mortality, shorter lethal duration of feeding) over a 12-wk exposure period to outdoor weather than spheres treated with Digon at 1.0% (AI) after both types were retreated with sucrose. Thus, imidacloprid is a promising safe substitute for dimethoate as a **fly** killing agent on lure-kill spheres. Imidacloprid formulated as Merit 75 WP had greater residual efficacy than imidacloprid formulated as Provado 1.6 F.

IT **138261-41-3**, Imidacloprid
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(toxicity and residual effectiveness of insecticides on insecticide-treated spheres for controlling females of Rhagoletis pomonella)

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 18 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:567243 HCAPLUS
DOCUMENT NUMBER: 133:262608
TITLE: Susceptibility of Arizona whiteflies to chloronicotinyl insecticides and IGRS: New developments in the 1999 season
AUTHOR(S): Li, Youngsheng; Dennehy, Timothy J.; Li, Xiaohua; Wigert, Monika E.
CORPORATE SOURCE: Extension Arthropod Resistance Management Laboratory Department of Entomology, The University of Arizona, Tucson, AZ, USA
SOURCE: Proceedings - Beltwide Cotton Conferences (2000), (Vol. 2), 1325-1330
CODEN: PCOCEN; ISSN: 1059-2644
PUBLISHER: National Cotton Council
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Whiteflies are serious pests of cotton, melons, and winter vegetables in Arizona's low deserts. Successful management of whiteflies requires an integrated approach, a crit. element of which is routine pest monitoring. In this paper we report findings of our 1999 investigations of resistance of Arizona whiteflies to insect growth regulators (IGRs) and chloronicotinyl insecticides. Whiteflies collected from cotton fields, melon fields and greenhouses were tested for susceptibility to imidacloprid (Admire/Provado), and two other chloronicotinyl insecticides, acetamiprid and thiamethoxam, and to two insect growth regulators (IGRs), buprofezin (Applaud) and pyriproxyfen (Knack). Contrasts of 1998 and 1999 results indicated increased susceptibilities, on av., to both imidacloprid and buprofezin of whiteflies collected from cotton. A cropping system study showed that whiteflies collected from spring melons had significantly lower susceptibility to imidacloprid than those collected from cotton or fall melons. The opposite was found for pyriproxyfen, to which whiteflies from cotton and fall melons had lower susceptibility than those from spring melons. As in 1998, whiteflies with reduced susceptibility to imidacloprid continue to be found in certain locations, particularly in spring melon fields and greenhouses. Results of our lab. bioassays on susceptibility of Arizona whiteflies to chloronicotinyl insecticides provided evidence of a low order cross-resistance between imidacloprid, acetamiprid and thiamethoxam. Monitoring in 1999 provided the first evidence of reduced susceptibility of Arizona whiteflies to pyriproxyfen.

IT **138261-41-3**, Imidacloprid **160430-64-8**, Acetamiprid
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study);

USES (Uses)
(susceptibility of whiteflies to)

L14 ANSWER 19 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:319680 HCAPLUS
DOCUMENT NUMBER: 132:330840
TITLE: Thiamethoxam seed treatment for sugar beet, corn, and cereal protection against pests
AUTHOR(S): De Proft, M.; De Ryckel, B.; Ducat, N.; Pigeon, O.; Bernes, A.
CORPORATE SOURCE: Ministere des Classes Moyennes et de l'Agriculture Centre de Recherches Agronomiques de Gembloux Departement de Phytopharmacie, Gembloux, B-5030, Belg.
SOURCE: Mededelingen - Faculteit Landbouwkundige en Toegepaste Biologische Wetenschappen (Universiteit Gent) (1999), 64(3a), 327-341
CODEN: MFLBER; ISSN: 1373-7503
PUBLISHER: Universiteit Gent, Faculteit Landbouwkundige en Toegepaste Biologische Wetenschappen
DOCUMENT TYPE: Journal
LANGUAGE: French
AB Since 1996, thiamethoxam, a novel neonicotinoid insecticide for seed treatment, is tested in Belgium against soil and foliage pests of sugar beet, maize, cereals and other crops. These research field trials have been conducted following the EPPO guidelines to evaluate the activity of thiamethoxam. The efficacy spectrum of thiamethoxam is very similar as that of imidacloprid, the first neonicotinoid registered in Belgium. In the trials conducted during the three last years, imidacloprid was the principal ref. For sugar beet seeds, treatments were made in facilities of specialized companies, but a check was made on received seeds by conducting chem. anal. in our Pesticide Research Department. The other seeds were treated by ourself and also analyzed. So, contrary to trials with treated seeds where the dosages are not sure, in these trials, the tested dosages of insecticides were accurately known. At 60 g a.i./100 000 seeds, thiamethoxam protects successfully sugar beet against aphids and pigmy beetle, two major pests in Belgium, and also against wireworms and other minor pests. At lower dosages to 30 g a.i./100 000 seeds, protection remains good, at the very least in normal crop conditions. In maize, thiamethoxam tested in 1997 gave an excellent control of aphids. This year, a big infestation of Metopolophium dirhodum Walk have made important damages in unprotected plots. In these trials, thiamethoxam appeared more efficient than imidacloprid against aphids. In 1998, wireworm damages were strong in the trials. The protection by thiamethoxam was also excellent. In cereals, the first aim of trials was the control of aphids vector of BYDV. For this use, thiamethoxam gave good results. On the other hand, it controlled neither wheat bulb **fly** nor bean seed **flies**. Phytotoxic effects of thiamethoxam have not been obsd. in any crop.
IT **138261-41-3**, Imidacloprid
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(seed treatment for sugar beet, corn, and cereal protection against pests)
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 20 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:25361 HCAPLUS
DOCUMENT NUMBER: 132:232989
TITLE: Interactions of a Nucleopolyhedrovirus with Azadirachtin and Imidacloprid
AUTHOR(S): Koppenhofer, Albrecht M.; Kaya, Harry K.
CORPORATE SOURCE: Department of Nematology, University of California, Davis, CA, 95616, USA

SOURCE: Journal of Invertebrate Pathology (2000), 75(1), 84-86
CODEN: JIVPAZ; ISSN: 0022-2011
PUBLISHER: Academic Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The Heliothis single-embedded nucleopolyhedrovirus (HzSNPV), azadirachtin and imidacloprid are compatible with each other for H. virescens control. Recommended applications of azadirachtin and imidacloprid against white **flies**, lygus bugs and aphids should not interfere with HzSNPV efficacy against H. virescens. (c) 2000 Academic Press.
IT **138261-41-3**, Imidacloprid
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(interactions of nucleopolyhedrovirus with azadirachtin and imidacloprid in Heliothis virescens control)
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 21 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:685207 HCAPLUS
DOCUMENT NUMBER: 132:9920
TITLE: Evaluation of imidacloprid against flea beetles, Phyllotreta spp., and cabbage root **fly**, Delia radicum, in glasshouse trials
AUTHOR(S): Finch, S.; Edmonds, G.
CORPORATE SOURCE: Horticulture Research International, Warwick, CV35 9EF, UK
SOURCE: Tests of Agrochemicals and Cultivars (1999), 20, 2-3
CODEN: TACUDC; ISSN: 0951-4309
PUBLISHER: Association of Applied Biologists
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Flea beetles were controlled by imidacloprid (I) on Brussels sprout. I did not reduce the no. of cabbage root **fly** larvae per plant, but had a beneficial crop protection effect, as the final wt. pf the plants increased with the I dose. Fewer insects were recovered from the untreated plants than from those treated, because several of the untreated plants died before any larvae completed their development.
IT **138261-41-3**, Imidacloprid
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(control of Phyllotreta and Delia radicum by imidacloprid on Brussels sprout)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 22 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:311060 HCAPLUS
DOCUMENT NUMBER: 130:321894
TITLE: Control of Tephritidae fruit **flies**
INVENTOR(S): Nigg, Herbert N.; Simpson, Samuel E.
PATENT ASSIGNEE(S): University of Florida, USA
SOURCE: PCT Int. Appl., 15 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9922595	A1	19990514	WO 1998-US22950	19981029

W: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GD, GE, HR, HU, ID, IL, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, UZ, VN, YU, AM, AZ, BY, KG,

KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 9912059	A1	19990524	AU 1999-12059	19981029
US 2001039288	A1	20011108	US 2001-767200	20010123

PRIORITY APPLN. INFO.:
US 1997-63862P P 19971031
US 1998-182166 B1 19981029
WO 1998-US22950 W 19981029

AB Imidacloprid controls fruit **flies**. It has low mammalian toxicity. Optionally borax is added to imidacloprid.

IT **138261-41-3**, Imidacloprid
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(for control of Tephritidae fruit **flies**)

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 23 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:701385 HCAPLUS
DOCUMENT NUMBER: 130:77436
TITLE: Prediction of the binding mode of imidacloprid and related compounds to house-**fly** head acetylcholine receptors using three-dimensional QSAR analysis
AUTHOR(S): Okazawa, Atsushi; Akamatsu, Miki; Ohoka, Akira; Nishiwaki, Hisashi; Cho, Won-Jea; Nakagawa, Yoshiaki; Nishimura, Keiichiro; Ueno, Tamio
CORPORATE SOURCE: Graduate School of Agriculture, Kyoto University, Kyoto, 606-8502, Japan
SOURCE: Pesticide Science (1998), 54(2), 134-144
CODEN: PSSCBG; ISSN: 0031-613X
PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The binding activity of imidacloprid and related compds. to nicotinic acetylcholine receptors (nAChR) of house **flies** was measured by use of radioactive .alpha.-bungarotoxin as a ligand. Variations in the activity were examd. three-dimensionally using comparative mol. field anal. (CoMFA). The CoMFA results suggest that one conformer among the four stable ones is active and provide support for one of the proposed binding models for this class of compd.; in which the nitrogen atom of the pyridine ring and the nitrogen atom at the 1-position of the imidazolidine ring interact with the hydrogen-donating and electron sites of nAChR, resp. The CoMFA field map showed that the nitroimino moiety and portion of the imidazolidine ring were mainly surrounded by a sterically and electrostatically sensitive region of nAChR.

IT **100553-56-8 100553-57-9 101336-63-4**
101336-64-5 101990-37-8 105828-05-5
105828-97-5 111988-43-3 117906-15-7
138261-41-3, Imidacloprid
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(prediction of the binding mode of imidacloprid and related compds. to house-**fly** head acetylcholine receptors)

REFERENCE COUNT: 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 24 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:696210 HCAPLUS
DOCUMENT NUMBER: 130:62378
TITLE: Effects of sugar/flour spheres coated with paint and insecticides on alighting female Ceratitis capitata (Diptera: Tephritidae) **flies**

AUTHOR(S): Hu, Xing Ping; Duan, Jian Jun; Prokopy, Ronald J.
CORPORATE SOURCE: Department of Entomology, University of Massachusetts, Amherst, MA, 01003, USA
SOURCE: Florida Entomologist (1998), 81(3), 318-325
CODEN: FETMAC; ISSN: 0015-4040
PUBLISHER: Florida Entomological Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB We studied the behavior and fate of mature, wild-origin Ceratitis capitata (Wiedemann) females allowed to feed on 7-cm-diam. spheres comprised of a mixt. of sugar, flour and glycerin and coated with yellow latex paint contg. either no insecticide, dimethoate (1.5% a.i.) or imidacloprid (1.5% a.i.). Females feeding on imidacloprid-treated spheres for 20 s exhibited very little tendency to forage within host plants or to lay eggs either shortly after or 24 h after feeding, and suffered high mortality within 48 h. In contrast, females feeding on dimethoate-treated spheres for 180 s exhibited, shortly thereafter, a tendency to forage within host plants and to lay eggs about equal to that of females feeding on untreated spheres, although they suffered high mortality within 24 h. In a field test, imidacloprid-treated sugar/flour spheres provided a significant level of protection of fruit from oviposition by C. capitata during 24 h periods (equal to that provided by sticky yellow spheres), whereas dimethoate-treated spheres did not. Further research on long-term activity of pesticide residue and on sphere performance under natural conditions will be necessary, however, before sugar/flour spheres coated with yellow latex paint and insecticide can be recommended for control of C. capitata.

IT **138261-41-3**, Imidacloprid
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(sugar/flour spheres coated with paint and insecticides effect on female fruit **flies**)

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 25 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:693367 HCAPLUS
DOCUMENT NUMBER: 130:11560
TITLE: Insect control in upland farming with fertilizer compositions containing insecticides
INVENTOR(S): Ohuchi, Seigo; Shibata, Takehiko; Hiraoka, Hiroshi; Okada, Shoji
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan; Nippon Bayer Agrochem K. K.
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10287502	A2	19981027	JP 1997-89827	19970408

PRIORITY APPLN. INFO.: JP 1997-89827 19970408

AB Insects are controlled in upland farming by applying fertilizer compns. contg. nitromethylene, nitroimino, and/or cyanoimino insecticides having soly. in water .gtoreq.100 ppm into deep soil layers at the parts where seeds are sown or seedlings are transplanted, before sowing seeds or transplanting seedlings. Green pepper was transplanted into upland soil premixed with a granular N-P-K fertilizer compn. contg. 1-(6-chloro-3-pyridylmethyl)-N-nitroimidazolidin-2-ylideneamine (I) was

mixed with upland soil at 3 kg/are as I. Occurrence of Thrips palmi was significantly inhibited in the soil for 57 days after transplantation.

IT **131748-59-9 135410-20-7 136516-19-3 138261-41-3 150824-47-8**
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(insect control in upland farming with fertilizer compns. contg. nitromethylene, nitroimino, and/or cyanoimino insecticides)

L14 ANSWER 26 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:245034 HCAPLUS
DOCUMENT NUMBER: 128:291454
TITLE: Lethal and sublethal effects of imidacloprid on apple maggot **fly**, Rhagoletis pomonella Walsh (Dipt., Tephritidae)
AUTHOR(S): Hu, X. P.; Prokopy, R. J.
CORPORATE SOURCE: Department of Entomology, University of Massachusetts, Amherst, USA
SOURCE: Journal of Applied Entomology (1998), 122(1), 37-42
CODEN: JOAEEB; ISSN: 0931-2048
PUBLISHER: Blackwell Wissenschafts-Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Imidacloprid tech. ingredient was tested in the lab. to det. ingestion/contact or contact alone toxicity over a 5-day period to R. pomonella. Formulated imidacloprid was also tested in the field against R. pomonella **flies** for residual efficacy over a 7-day period. In the lab. tests, imidacloprid showed high lethal and sublethal effects. It was 10-12 times more toxic and acted more rapidly by oral ingestion than by surface contact. Affected **flies** were obsd. to cease feeding and then regurgitate. Mortality stabilized 4 days after treatment. Compared with control **flies**, females exposed to imidacloprid showed reduced fecundity regardless of whether exposure was by oral or surface contact. In field expts., spray applications of imidacloprid to foliage at the manufacturer's recommended rate resulted in no significant mortality of **flies**, either among **flies** released immediately after treatment or 24 h later. Imidacloprid residue on tree leaves reduced the reproductive ability of **flies** released immediately after treatment, but the effect was minimal. The potential use of imidacloprid as a toxicant on pesticide-treated spheres is discussed.

IT **138261-41-3**, Imidacloprid
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(lethal and sublethal effects of imidacloprid on Rhagoletis pomonella)

L14 ANSWER 27 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:146652 HCAPLUS
DOCUMENT NUMBER: 128:189505
TITLE: Insecticidal device
INVENTOR(S): Shasha, Baruch S.; McGuire, Michael R.; Hu, Xing Ping; Prokopy, Ronald J.
PATENT ASSIGNEE(S): United States Dept. of Agriculture, USA
SOURCE: U.S., 7 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5720968	A	19980224	US 1996-701088	19960821

WO 9807315 A1 19980226 WO 1997-US14493 19970818
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG
AU 9740720 A1 19980306 AU 1997-40720 19970818
EP 921724 A1 19990616 EP 1997-938380 19970818
EP 921724 B1 20020410
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI
AT 215775 E 20020415 AT 1997-938380 19970818
PRIORITY APPLN. INFO.: US 1996-701088 A 19960821
WO 1997-US14493 W 19970818

AB The invention is a device for delivering an insecticide, made of (a) an outer layer comprising a porous water-insol. polymer; (b) an inner layer in contact with the outer layer, the inner layer comprising a water-sol. feeding stimulant and a carbohydrate which is at least partially gelatinized; and (c) a toxicant which is present on or in the outer layer, the inner layer, or both. The pests for which the device may be used are those that can be attracted to an object to feed and/or lay eggs, such as the apple maggot **fly**, the Mediterranean fruit **fly**, the house **fly**, the oriental fruit **fly**, the blueberry fruit **fly**, the olive fruit **fly**, the melon fruit **fly**, and the Mexican fruit **fly** as well as other **flies**, beetles, wasps, moths, cockroaches, and any other insect that can be lured to a device for feeding or egg laying. The porous water-insol. polymeric materials are pits, shellacs, linseed oil and other water-sol. or water-suspendible material that becomes insol. upon drying. Examples of water-sol. feeding stimulants are sucrose, glucose, fructose, molasses, maltodextrin, and corn syrup as well as corn flour, gluten or other sugary or proteinaceous and lipid materials. Examples of carbohydrates are corn flour, corn starch, wheat starch, and potato starch. Toxicants which may be used are dimethoate, phloxine B, avermectin, azinphosmethyl, diazinon, permethrin, imidacloprid, malathion, methomyl, etc. A high boiling liq. such as glycerin may optionally be added to the carbohydrate first layer to prevent cracking.

IT **138261-41-3**, Imidacloprid
RL: AGR (Agricultural use); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(insecticidal device contg.)

L14 ANSWER 28 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:20864 HCAPLUS
DOCUMENT NUMBER: 128:85425
TITLE: Relative susceptibility of some field strains of Bemisia tabaci Genn. (Aleurodidae) to certain insecticides
AUTHOR(S): Ayad, F. A.; El-Shehaby, M. I.; Allam, S. M.; Bakry, N. M.
CORPORATE SOURCE: Central Agricultural Pesticide Laboratory, A. R. C. El-Dokki, Cairo, Egypt
SOURCE: Alexandria Science Exchange (1997), 18(3), 277-286
CODEN: ALSEEF; ISSN: 1010-1098
PUBLISHER: Prof. Dr. A. M. Balba Group for Soil and Water Research
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The efficacy of certain insecticides against white **fly**, (Bemisia tabaci) adults was evaluated in different Egyptian governorates.

Abamectin (Vertimec) was highly effective and stands alone in a category according to the LC50 and LC90 values. The other tested insecticides were less active and behaved differently according to the strain location. However, certain insecticides which are applied in different governorates such as ectofenprox (Trebon), imidacloprid (Confidor), pirimiphos Me (Actellic), profenofos (Selecron), diafenthiuron (Polo) and azadirachtin (Neem-Azal) are quite effective and could be recommended for controlling the adults of the white **fly**.

IT **138261-41-3**, Imidacloprid
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(susceptibility of Bemisia tabaci to insecticides)

L14 ANSWER 29 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:561649 HCAPLUS
DOCUMENT NUMBER: 127:203161
TITLE: Whitefly (Hemiptera: Aleyrodidae) binding site for imidacloprid and related insecticides: a putative nicotinic acetylcholine receptor
AUTHOR(S): Chao, Shirley Lee; Dennehy, Tim J.; Casida, John E.
CORPORATE SOURCE: Environmental Chemistry and Toxicology Laboratory, Department of Environmental Science, Policy, and Management, University of California, Berkeley, CA, 94720-3112, USA
SOURCE: Journal of Economic Entomology (1997), 90(4), 879-882
CODEN: JEENAI; ISSN: 0022-0493
PUBLISHER: Entomological Society of America
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Imidacloprid is used extensively to control sweet potato whiteflies, Bemisia argentifolii [also known as B. tabaci (Gennadius) biotype B]. As a radioligand, [3H]imidacloprid binds rapidly to a single class of high-affinity sites in membrane prepns. from whole adult whiteflies with an apparent dissocn. const. of 2 nM and maximal binding capacity of 101 fmol/mg protein. Three related compds. (the nitromethylene analog of imidacloprid, acetamiprid, and nitenpyram) inhibit [3H]imidacloprid binding by 50% at 0.40, 2.9, and 57 nM, resp. The pharmacol. profile of the binding site (examd. with imidacloprid and the analogs listed above, and nicotine, .alpha.-bungarotoxin, carbachol, acetylcholine [with paraoxon], and atropine) is consistent with that anticipated for a nicotinic acetylcholine receptor and correlates well with binding results for house **fly**, Musca domestica head membranes under the same conditions. Thus, [3H]imidacloprid is a suitable radioligand to investigate the putative nicotinic acetylcholine receptor of Bemisia and the possible modifications of this target site assocd. with selection of resistant strains.

IT **101336-63-4 150824-47-8**, Nitenpyram **160430-64-8**
, Acetamiprid
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(putative nicotinic acetylcholine receptor in relation to whitefly binding site for imidacloprid and related insecticides)

IT **138261-41-3**, Imidacloprid
RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses)
(putative nicotinic acetylcholine receptor in relation to whitefly binding site for imidacloprid and related insecticides)

L14 ANSWER 30 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:371224 HCAPLUS
DOCUMENT NUMBER: 126:340029
TITLE: Evaluating insecticides for the control of narcissus

flies under field conditions in Israel
AUTHOR(S): Ben-Yakir, D.; Hadar, Ester; Chen, M.
CORPORATE SOURCE: Dep. Entomol., Volcani Cent., ARO, Bet Dagan, 50250, Israel
SOURCE: Phytoparasitica (1997), 25(2), 93-97
CODEN: PHPRA2; ISSN: 0334-2123
PUBLISHER: Priel Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The large narcissus **fly** (Merodon equestris) is the major pest, whereas the small narcissus **fly** (a new species in the genus Eumerus, yet to be described) is only a secondary pest. Narcissus bulbs, Narcissus tazetta were planted and harvested. Currently, aldicarb (Temik) is recommended for the control of narcissus **fly** larvae. The authors We compared the control efficacy of imidacloprid (Confidor) and isazofos (Miral) with that of aldicarb. The mean level of damaged bulbs in the untreated plats was 32%. Two applications of aldicarb, one in Feb. and one in Apr., reduced the damage to the lowest level of 0.5%. A single application of aldicarb in Feb., and two applications of imidacloprid, one in Feb. and one in Apr., reduced the damage to 5-10%. Treatments with imidacloprid in Feb. or in Apr., reduced the damage to 12-13%. Neither one application of aldicarb in Apr., nor any of the treatments with isazofos, was effective. In all treatments, larvae of the large narcissus **fly** were found in only approx. one-third of the damaged bulbs. The level of infestation with the small narcissus **fly** in the untreated bulbs was only approx. 2%. The effects of the insecticide treatments on the small narcissus **fly** were similar to those recorded for the large narcissus **fly**.
IT **138261-41-3**, Imidacloprid
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(control of narcissus **flies**)

L14 ANSWER 31 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:271407 HCAPLUS
DOCUMENT NUMBER: 126:289417
TITLE: Cross-resistance to imidacloprid in strains of German cockroach (Blattella germanica) and housefly (Musca domestica)
AUTHOR(S): Wen, Zhimou; Scott, Jeffrey G.
CORPORATE SOURCE: Dep. Entomol., Cornell Univ., Ithaca, NY, 14853-0901, USA
SOURCE: Pesticide Science (1997), 49(4), 367-371
CODEN: PSSCBG; ISSN: 0031-613X
PUBLISHER: Wiley
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The toxicity of imidacloprid was evaluated against several susceptible and resistant strains of German cockroach and housefly. Imidacloprid rapidly immobilized German cockroaches, followed by a period of about 72 h during which some cockroaches recovered. After 72 h there was no further recovery. Imidacloprid-treated houseflies were immobilized more slowly than treated cockroaches, with the max. effect obsd. after 72 h, and there was no recovery. Based upon 72-h LD50 values, imidacloprid was moderately toxic to German cockroaches (LD50 6-8 ng mg-1) and had only low toxicity to houseflies (LD50 140 ng mg-1). Piperonyl butoxide (PBO) blocked the obsd. recovery in German cockroaches. PBO also greatly enhanced the 72-h LD50 of imidacloprid from 43- to 59-fold in cockroaches and 86-fold in houseflies. Two strains of German cockroach (Baygon-R and Pyr-R) showed >4-fold cross-resistance to imidacloprid. This cross-resistance could not be suppressed by PBO, suggesting that P 450 monooxygenase-mediated detoxication is not responsible for this cross-resistance. Variation in the level of synergism obsd. with PBO (between strains) suggests the 'basal' level of monooxygenase-mediated detoxication of imidacloprid is

variable between strains of German cockroach. The AVER and LPR strains of house **fly** showed significant cross-resistance to imidacloprid. PBO reduced the level of cross-resistance in AVER from >4.2-fold to 0.5-fold (i.e. the AVER strain LD50 was half that of the susceptible strain when both were treated with PBO), but PBO did not suppress the cross-resistance in LPR. Monooxygenases are the mechanism responsible for cross-resistance to imidacloprid in AVER, but not in the LPR strain.

IT **138261-41-3**, Imidacloprid
RL: ADV (Adverse effect, including toxicity); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(cross-resistance to imidacloprid in strains of German cockroach and housefly)

L14 ANSWER 32 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:86673 HCAPLUS
DOCUMENT NUMBER: 126:128245
TITLE: Effectiveness of seed treatment with carbosulfan and imidacloprid in the control of carrot rust **fly** Psila rosae
AUTHOR(S): Narkiewicz-Jodko, J.
CORPORATE SOURCE: Res. Inst. Vegetable Crops, Skierniewice, 96-100, Pol.
SOURCE: Mededelingen - Faculteit Landbouwkundige en Toegepaste Biologische Wetenschappen (Universiteit Gent) (1996), 61(3a), 895-898
CODEN: MFLBER
PUBLISHER: Universiteit Gent, Faculteit Landbouwkundige en Toegepaste Biologische Wetenschappen
DOCUMENT TYPE: Journal
LANGUAGE: English

AB In 1992-1995 field expts. on the performance of Marshal 250 DS (carbosulfan) and Gaucho 350 FS (imidacloprid) in the control of carrot rust **fly** were carried out on sandy loamy soil. The expts. were conducted in 4 replicates in a randomized block design. In order to det. the effect of carrot rust **fly** control, the percentage of infested plants was assessed during the harvest. Both insecticides are promising for the control of carrot rust **fly**. In the regions with permanent heavy infestation of carrot rust **fly**, addnl. spraying for the control of second generation can be needed.

IT **138261-41-3**, Imidacloprid
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(seed treatment with carbosulfan and imidacloprid for control of carrot rust **fly**)

L14 ANSWER 33 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:60252 HCAPLUS
DOCUMENT NUMBER: 126:114622
TITLE: Use of new alkynyl synergists to counter insecticide resistance
AUTHOR(S): Pap, L.; Bertok, B.; Bakonyvari, I.; Szekely, I.
CORPORATE SOURCE: CHINOIN AgChem Business Unit, Budapest, H-1780, Hung.
SOURCE: Brighton Crop Protection Conference--Pests and Diseases (1996), (Vol. 2), 751-760
CODEN: BCPDED; ISSN: 0955-1506
PUBLISHER: British Crop Protection Council
DOCUMENT TYPE: Journal
LANGUAGE: English

AB New alkynyl synergists were synthesized and tested in the lab. by co-administration with different insecticides including representatives of organochlorines, carbamates, organophosphorous, pyrethroids and macrocyclic lactones. The synergistic potency of these chems. was simultaneously detd. on a susceptible WHO/SRS, two lab.-selected resistant (pyrethroid-resistant CHXSEL and carbamate-resistant CARBSEL) and a field collected multiple resistant (MD-IX) house **fly** (Musca domestica)

strains. Spectrum of synergistic action and the cross-resistance patterns proved to be characteristic of strain. A lab. selection expt. on housefly using carbofuran or a new synergist, MB-279+carbofuran as selecting agents showed that resistance did not evolve at all to the mixt. compared to the selection which used carbofuran alone. While the carbofuran selected group (CARBSEL) showed 918 and 600 resistance ratios at F3 generation in the female and male **flies** resp., the group selected with the mixt. (CS279) collapsed at F4. Moreover, high suppression in adult emergence from pupae was obtained in the **fly** group selected jointly with carbofuran+synergist, but not in the group selected only with carbofuran.

IT **138261-41-3**, Imidacloprid
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(synergistic activity of MB-279 on insecticides in house **fly**)

L14 ANSWER 34 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:762697 HCAPLUS
DOCUMENT NUMBER: 126:56307
TITLE: Efficacity of seed dressing with Promet 400 CS and Gaucho 350 FS in control of the oat pests in the piedmont conditions
AUTHOR(S): Lisowicz, Franciszek
CORPORATE SOURCE: Instytut Ochrony Roslin, Rzeszow, 35-101, Pol.
SOURCE: Materialy Sesji Naukowej Instytutu Ochrony Roslin (Poznan) (1996), Volume Date 1995, 35(2), 33-35
CODEN: MSNRD5; ISSN: 0208-4414
PUBLISHER: Panstwowe Wydawnictwo Rolnicze i Lesne, Oddzial w Poznaniu
DOCUMENT TYPE: Journal
LANGUAGE: Polish

AB Control of the spring generation of frit **fly** (Oscinella frit L.) on oat with seed dressing with Promet 400 CS and Gaucho 350 FS was studied. Dressing could be alternative for foliar spraying with insecticides performed at the stage of oat propagation (GS 25-29).

IT **138261-41-3**, Gaucho
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(control of frit **fly** with seed dressing with Promet 400 CS and Gaucho 350 FS)

L14 ANSWER 35 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:30055 HCAPLUS
DOCUMENT NUMBER: 124:79467
TITLE: Nonsystemic ectoparasiticides.
INVENTOR(S): Dorn, Hubert; Hopkins, Terence
PATENT ASSIGNEE(S): Bayer A.-G., Germany
SOURCE: Eur. Pat. Appl., 33 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 682869	A1	19951122	EP 1995-106925	19950508
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, NL, PT, SE				
DE 4417742	A1	19951123	DE 1994-4417742	19940520
CA 2149594	AA	19951121	CA 1995-2149594	19950517
IL 113756	A1	19991028	IL 1995-113756	19950517
FI 9502421	A	19951121	FI 1995-2421	19950518
AU 9520144	A1	19951130	AU 1995-20144	19950518

AU 696581	B2	19980917			
NO 9501993	A	19951121	NO 1995-1993		19950519
ZA 9504107	A	19960119	ZA 1995-4107		19950519
HU 71902	A2	19960228	HU 1995-1483		19950519
HU 220131	B	20011128			
JP 08092091	A2	19960409	JP 1995-144251		19950519
JP 3276808	B2	20020422			
RU 2166253	C2	20010510	RU 1995-107893		19950519
JP 2002201131	A2	20020716	JP 2001-386054		19950519
CZ 291031	B6	20021211	CZ 1995-1309		19950519
US 6232328	B1	20010515	US 1997-925372		19970908
US 2001021716	A1	20010913	US 2001-781108		20010209
US 6429206	B2	20020806			
US 2001027201	A1	20011004	US 2001-780646		20010209
US 2001041723	A1	20011115	US 2001-780918		20010209
US 6495573	B2	20021217			
US 2001044456	A1	20011122	US 2001-780783		20010209
US 6329374	B1	20011211	US 2001-781028		20010209
PRIORITY APPLN. INFO.:			DE 1994-4417742	A	19940520
			US 1995-440428	B1	19950512
			JP 1995-144251	A3	19950519
			US 1997-925372	A3	19970908

OTHER SOURCE(S): MARPAT 124:79467

AB Agonists and antagonists of nicotinergic acetylcholine receptors (Markush given), such as imidacloprid, are nonsystemic ectoparasiticides for humans and animals, suitable for the control of fleas, lice and **flies**.

IT **101336-64-5 105828-97-5 105843-36-5**
111988-43-3 120738-59-2 120738-88-7
131748-49-7 131748-54-4 131748-55-5
136516-18-2 138261-41-3 160430-64-8
172333-78-7 172333-81-2
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nonsystemic ectoparasiticide)

L14 ANSWER 36 OF 44 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1995:452668 HCAPLUS
DOCUMENT NUMBER: 122:207684
TITLE: Effect of seed treatment with carbosulfan and imidacloprid for the control of onion **fly** Delia antiqua
AUTHOR(S): Narkiewicz-Jodko, J.
CORPORATE SOURCE: Research Institute of Vegetable Crops, Skierniewice, 96-100, Pol.
SOURCE: Mededelingen - Faculteit Landbouwkundige en Toegepaste Biologische Wetenschappen (Universiteit Gent) (1994), 59(2b), 599-604
CODEN: MFLBER
PUBLISHER: Universiteit Gent, Faculteit Landbouwkundige en Toegepaste Biologische Wetenschappen
DOCUMENT TYPE: Journal
LANGUAGE: English

AB In 1989-1993 field expts. on the performance of NTN 350 FS (imidacloprid) and Marshal 250 DS (carbosulfan) as seed treatment for the control of onion **fly** were carried out in central Poland on sandy loamy soil, contg. 1.3% of humus. Both Marshal 250 DS and NTN 350 FS are very promising insecticides for the control of onion **fly**. Marshal 250 DS is registered already in Poland and in 1993 was applied with good success on over 10.000 ha of onion. The recommended rate is 70 g of Marshal 250 DS/kg of onion seed. NTN 350 FS at present is in the last stage of registration and will be recommended in the rates of 50-60 mL/kg of onion seed. This method is also least harmful to the environment.

IT **138261-41-3**, Imidacloprid

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(NTN 350 FS; effect of seed treatment with carbosulfan and imidacloprid for the control of onion **fly**)

L14 ANSWER 37 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:227971 HCAPLUS
DOCUMENT NUMBER: 122:25832
TITLE: Nitromethyleneimidazolidine radioligand ([3H]NMI): high affinity and cooperative binding for house **fly** acetylcholine receptor
AUTHOR(S): Liu, Ming-Yie; Latli, Bachir; Casida, John E.
CORPORATE SOURCE: Dep. Environmental Science, Policy and Management, Univ. California, Berkeley, CA, 94720-3112, USA
SOURCE: Pesticide Biochemistry and Physiology (1994), 50(2), 171-82
CODEN: PCBPBS; ISSN: 0048-3575
PUBLISHER: Academic
DOCUMENT TYPE: Journal
LANGUAGE: English

AB 1-[N-(2-Chloro-5-thiazolylmethyl)]-2-nitromethylene-imidazolidine (NMI) is a very potent insecticide and is 6-fold more effective than imidacloprid (IMI) in displacing [3H]IMI from its binding site in the house **fly** acetylcholine (ACh) receptor (AChR). NMI differs from IMI in two isosteric replacements, i.e., 2-chloro-5-thiazolyl (CT) for 6-chloro-3-pyridinyl (CP) and nitromethylene for nitroimine. The CP and CT moieties in this series confer almost equiv. potency and binding properties allowing intercomparisons based on the nitromethylene and nitroimine substituents. [3H]NMI (55 Ci/mmol) was prepd. from 2-chloro-5-(carbethoxy)thiazole by reducing with lithium aluminum tritide to the alc. which was converted to the chloromethyl deriv. and then coupled with ethylenediamine followed by reaction with 1,1-bis(methylthio)-2-nitroethylene. Binding parameters in house **fly** head membranes treated with Triton X-100 are very similar for [3H]NMI nd [3H]IMI, each with a single saturable specific binding site of Kd = 1.2 nM and Bmax = 853-897 fmol/mg protein, and there are also similar initial rates of assocn. and dissocn. for the two radioligands. However, there is a significant difference in the Hill coeff. with 1.4 .+-. 0.06 for NMI and 1.0 .+-. 0.1 for IMI. Without Triton X-100 treatment, there are both low and high affinity binding components for [3H]IMI but only a low affinity one for [3H]NMI. Competing ligands are less effective at displacing [3H]NMI than [3H]IMI, e.g., 9-fold for ACh (with paraoxon to inhibit acetylcholinesterase), 40-fold for carbachol, and 2- to 6-fold for the nicotinic agents (-)-nicotine and .alpha.-bungarotoxin. The enhanced insecticidal activity and receptor potency of NMI compared with IMI may be assocd. with its higher apparent cooperativity facilitating disruption of the AChR.

IT **105828-97-5**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(nitromethyleneimidazolidine high affinity and cooperative binding for house **fly** acetylcholine receptor)

IT **138261-41-3**, Imidacloprid
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(nitromethyleneimidazolidine high affinity and cooperative binding for house **fly** acetylcholine receptor in comparison with)

IT **159694-11-8P 159694-12-9P**
RL: BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
(prepn. and nitromethyleneimidazolidine radioligand high affinity and cooperative binding for house **fly** acetylcholine receptor)

L14 ANSWER 38 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:292036 HCAPLUS
DOCUMENT NUMBER: 120:292036
TITLE: House **fly** head GABA-gated chloride channel: Four putative insecticide binding sites differentiated by [3H]EBOB and [35S]TBPS
AUTHOR(S): Deng, Yanli; Palmer, Christopher J.; Casida, John E.
CORPORATE SOURCE: Dep. Entomol. Sci., Univ. California, Berkeley, CA, 94720, USA
SOURCE: Pesticide Biochemistry and Physiology (1993), 47(2), 98-112
CODEN: PCBPBS; ISSN: 0048-3575
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Optimization of 4'-ethynyl-4-n-[3H]propylbicycloorthobenzoate ([3H]EBOB) and reexamn. of [35S]t-butylbicyclophosphorothionate ([35S]TBPS) as radioligands for the GABA receptor complex of house **fly** head membranes established their resp. binding parameters as follows: specific binding, 75 and 50-60%; apparent KDs, 2 and 145 nM; Bmaxs, 0.34 and 2.4 pmol/mg protein. Five groups of insecticides, all inhibitory to [3H]EBOB binding, were evaluated for potency at the [3H]EBOB and [35S]TBPS binding sites and competitive or noncompetitive inhibition with [3H]-EBOB. They are (1) polychlorocycloalkanes with emphasis on lindane analogs; (2) 1-aryl-trioxabicyclooctanes, 2-aryl-dithiane, aryl-silatrane, and picrotoxinin; (3) trioxabicyclooctanes including bicyclophosphorus esters and trithiabicyclooctanes and dithianes with smaller terminal substituents; (4) phenylpyrazoles; and (5) avermectins. Groups 1-4 are putative channel blockers and 5 is a channel activator. Addnl. observations were made on poisoning signs, temp. coeff. of poisoning, and cross-resistance in a dieldrin-resistant strain. The findings are interpreted in light of the authors' earlier differentiation, from studies with mice, of Type A action for compds. in groups 1 and 2 and Type B action for the trioxabicyclooctanes in group 3. In house **flies**, Type A action involves the EBOB site as toxicol. relevant for 1 and 2, and there are characteristic hyperexcitation signs, a pos. temp. coeff., and cross-resistance with dieldrin. Type B action (for some of the compds. in group 3) presumably involves the TBPS site, although its toxicol. relevance is not established, and there are different poisoning signs, a neg. temp. coeff., and no cross-resistance. Mixed Types A and B action is suggested for other compds. in group 3. Phenylpyrazoles (4) are related to Type A action except for noncompetitive inhibition of [3H]EBOB binding in **fly** membranes and low potency at the [3H]EBOB site in mammals and are therefore designated as Type C. The action of the avermectins (v), designated Type D, is coupled to the EBOB but not the TBPS site with poisoning signs of sedation and diuresis and no cross-resistance.
IT **138261-41-3**, Imidacloprid
RL: PRP (Properties)
(binding sites of, of GABA-gated chloride channel of housefly head)

L14 ANSWER 39 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1993:575846 HCAPLUS
DOCUMENT NUMBER: 119:175846
TITLE: Efficacy of imidacloprid against frit **fly** (Oscinella spp.) in newly-sown ryegrass (Lolium spp.)
AUTHOR(S): Clements, R. O.; Sheldrick, R. D.; Murray, P. J.; Lavender, R. H.
CORPORATE SOURCE: AFRC Inst. Grassl. Environ. Res., North Wyke/Okehampton/Devon., EX20 2SB, UK
SOURCE: Tests of Agrochemicals and Cultivars (1993), 14, 14-15
CODEN: TACUDC; ISSN: 0951-4309
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The proportion of tillers infested by frit larvae was reduced significantly ($P < 0.05$) by most treatments at both sites. None of the 63 larvae examd. was parasitized. The no. of seedlings 30 cm-1 drill row ranged from 5.9 to 8.3 at Burchetts Green and from 28.9 to 34.2 at North Wyke. Imidacloprid at 700 g 100 kg-1 seed increased yield significantly at the harvest (May 1992) at Burchetts Green.

IT **138261-41-3**, Imidacloprid
RL: BIOL (Biological study)
(frit **fly** in ryegrass control by)

L14 ANSWER 40 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1993:553987 HCAPLUS
DOCUMENT NUMBER: 119:153987
TITLE: Relevance of [3H]imidacloprid binding site in house **fly** head acetylcholine receptor to insecticidal activity of 2-nitromethylene- and 2-nitroimino-imidazolidines
AUTHOR(S): Liu, Ming Yie; Lanford, Jonathan; Casida, John E.
CORPORATE SOURCE: Dep. Entomol. Sci., Univ. California, Berkeley, CA, 94720, USA
SOURCE: Pesticide Biochemistry and Physiology (1993), 46(3), 200-6
CODEN: PCBPBS; ISSN: 0048-3575
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Twenty 2-nitromethylene- and 2-nitroiminoimidazolidines and their analogs were examd. as inhibitors of [3H]imidacloprid binding in the acetylcholine receptor of house **fly** head membranes and as knockdown agents for injected house **flies** pretreated with O-Pr O-(2-propynyl)phenylphosphonate as a synergist. The potency for inhibiting [13H]imidacloprid binding is generally a good predictor (with three exceptions) of the intrinsic neurotoxicity measured as knockdown effect ($r = 0.84$, $n = 17$). The six most potent inhibitors have IC50 values of 0.37 to 0.63 nM and KD50 values of 0.004 to 0.058 .mu.g/g. Optimal activity requires the following substituents for the imidacloprid analogs studied: 1-(6-methyl- or 6-chloro-3-pyridinyl)methyl or 1-(2-chloro-5-thiazolyl)methyl; NH, O, S, or CH2, but not NCH3, for the 3-substituent and :CHNO2 or :NNO2 for the 2-substituent of the imidazolidine moiety; one methylene between the pyridinyl and the imidazolidine moiety; tetrahydropyrimidine as an alternative heterocycle. The relatively low topical toxicity of almost all of the compds. to house **flies** is not attributable to a low affinity target site but instead to poor penetration and oxidative detoxification. [3H]imidacloprid is an excellent probe for examg. this toxicol. relevant binding site for an important new class of insecticides.

IT **100553-56-8 100553-57-9 101336-63-4**
101336-64-5 101990-37-8 105828-05-5
105828-97-5 111988-43-3 117906-15-7
RL: BIOL (Biological study)
(as inhibitors of imidacloprid binding in house **fly** head acetylcholine receptor, structure in relation to)

IT **138261-41-3**, Imidacloprid
RL: BIOL (Biological study)
(binding of, in house **fly** acetylcholine receptor, nitromethylene- and nitroiminoimidazolidines as inhibitors of)

L14 ANSWER 41 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1993:488871 HCAPLUS
DOCUMENT NUMBER: 119:88871
TITLE: High affinity binding of [3H]imidacloprid in the insect acetylcholine receptor
AUTHOR(S): Liu, Ming Yie; Casida, John E.
CORPORATE SOURCE: Dep. Entomol. Sci., Univ. California, Berkeley, CA,

94720, USA
SOURCE: Pesticide Biochemistry and Physiology (1993), 46(1), 40-6
CODEN: PCBPBS; ISSN: 0048-3575
DOCUMENT TYPE: Journal
LANGUAGE: English
AB 1-(6-Chloronicotinyl)-2-nitroimino-imidazolidine (imidacloprid or IMI) is a potent insecticide of a new chem. class considered from earlier studies to act at the insect nicotinic acetylcholine receptor. In a direct approach to the mode of action of IMI, it was radiolabeled and [3H]IMI was examd. in binding studies to elucidate its pharmacol. profile. [3H]IMI undergoes high high affinity specific binding in house **fly** head P2 membranes with 95% specific binding, a dissocn. const. of 1.2 nM, and a maximal binding site capacity of 853 fmol/mg protein. The std. binding assay consisted of 1 nM [3H]IMI and 200 .mu.g membrane protein in 50 mM NaCl, 10 mM sodium phosphate (pH 7.4) contg. 0.1% Triton X-100 with incubation for 60 min at 22.degree. prior to filtration. The radioligand undergoes rapid biphasic assocn. and dissocn. consistent with a two-stage sequential reaction in each case. [3H]IMI binding is very sensitive to carbachol (IC50 1.9 .mu.M) and other choline esters (IC50s 0.2 to 0.5 .mu.M for acetylcholine, propionylcholine, and butyrylcholine in the presence of paraoxon as a cholinesterase inhibitor). The pharmacol. profile for [3H]IMI binding indicates inhibition by both nicotinic and muscarinic agents with IC50s of 0.6 .mu.M for (-)-nicotine, 2.2 .mu.M for .alpha.-bungarotoxin, 30 .mu.M for D-tubocurarine, 90 .mu.M for atropine, 275 .mu.M for quinuclidinyl benzilate, and 288 .mu.M for dexetimide. Lineweaver-Burk plots establish competitive inhibition kinetics for [3H]IMI with acetylcholine, .alpha.-bungarotoxin, and quinuclidinyl benzilate. Detection of [3H]IMI binding in membrane prepns. from several insects but not from the vertebrates examd. is consistent with the selective toxicity of the nitromethylene and nitroimine insecticides.
IT **138261-41-3**, Imidacloprid
RL: PROC (Process)
(binding of, to insect acetylcholine receptor)

L14 ANSWER 42 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1993:96217 HCAPLUS
DOCUMENT NUMBER: 118:96217
TITLE: Effectiveness of chemical control of white **flies**, Aleurothrixus floccosus Mask. and Parabemisia myricae Kuw (Homopteres: Aleurodidae), and the effect on parasitic fauna, Encarsia transvena Timberlake (Hymenopteres: Aphelinidae)
AUTHOR(S): Dhouibi, M. H.
CORPORATE SOURCE: Lab. Entomol. Ecol., Tunis-Mahrajene, 1082, Tunisia
SOURCE: Mededelingen van de Faculteit Landbouwwetenschappen, Universiteit Gent (1992), 57(2b), 493-503
CODEN: MFLRA3; ISSN: 0368-9697
DOCUMENT TYPE: Journal
LANGUAGE: French
AB The 3 insecticides Applaud (buprofezin), Drawin 755 (butacarboxin), and Confidor 200 SL (imidochloprid) effectively controlled whiteflies over 2 mo. The insecticides exhibited high ovicidal activity and resulted in high mortality of young instars of P. myricae. The effect of Applaud on Cales noacki and E. transvena was small; however, the other 2 products were markedly toxic, esp. when applied twice at 15 day intervals.
IT **138261-41-3**, Confidor 200SL
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(whiteflies control by, beneficial fauna in relation to)

L14 ANSWER 43 OF 44 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1993:75235 HCAPLUS
DOCUMENT NUMBER: 118:75235
TITLE: Use of the systemic insecticide imidacloprid for sugarbeet seed dressing in Belgium in 1991
AUTHOR(S): Tossens, H.; Schoonejans, T.; Sysmans, J.; D'Hollander, R.; Vermeulen, R.; Vincinaux, C.
CORPORATE SOURCE: Bayer Belgium, Sint-Truiden, B-3800, Belg.
SOURCE: Mededelingen van de Faculteit Landbouwwetenschappen, Universiteit Gent (1992), 57(3a), 759-73
CODEN: MFLRA3; ISSN: 0368-9697
DOCUMENT TYPE: Journal
LANGUAGE: French

AB The selectivity, the range of activity, and both the level and duration of the efficacy of imidacloprid were detd. in a series of field expts. The results on Pigmy mangold beetle, flea beetle, wireworm, springtail, mangold **fly**, aphids, and yellow virus are presented. In some expts., doses of 45, 70 and 90 g /unit were compared. In every expt., imidacloprid was compared to a ref. product. Because of its selectivity, its biol. efficacy, and the increases in yield which were obtained, imidacloprid complies very well with the requirements of insecticide use regulations in Belgium.

IT **138261-41-3**, Imidacloprid
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(insecticidal activity of, in sugar beet seed treatments)

L14 ANSWER 44 OF 44 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:101077 HCAPLUS
DOCUMENT NUMBER: 116:101077
TITLE: Use of the systemic insecticide imidacloprid in beets, cereals, vegetables, and ornamentals in Belgium
AUTHOR(S): Schoonejans, T.; De Maeyer, L.; Tossens, H.; D'hollander, R.; Sysmans, J.; Baets, D.; Vincinaux, C.
CORPORATE SOURCE: Bayer Belgium, St-Truiden, Belg.
SOURCE: Mededelingen van de Faculteit Landbouwwetenschappen, Universiteit Gent (1991), 56(3b), 1161-79
CODEN: MFLRA3; ISSN: 0368-9697
DOCUMENT TYPE: Journal
LANGUAGE: French

AB Seed dressing of sugar beet with imidacloprid controlled pygmy beetle (Atomaria linearis), beet flea (Chaetocnema tibialis), Collembola (Onychiurus armatus), and aphids (Aphis fabae and Myzus persicae). Control of aphids for 8-10 wk after sowing prevented the transmission of virus yellows. Imidacloprid seed dressing of winter barley (70 g/100 kg) controlled aphids (including Sitobion avenae) in the fall and limited transmission of yellow dwarf virus. Granular imidacloprid (0.0125 g/plant) controlled aphids (M. persicae and Brevicoryne brassicae) on Brussels sprouts for several weeks. Repeated sprays of imidacloprid (0.0125%) on fuchsias were effective against white **fly** (Trialeurodes vaporariorum).

IT **138261-41-3**, Imidacloprid
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(barley and beets and Brussels sprouts and fuchsias protection by)

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E1 THROUGH E32 ASSIGNED

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DICTIONARY FILE UPDATES:  12 MAR 2003  HIGHEST RN 498527-50-7

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PROPERTIES for more information.  See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

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L15  ANSWER 1 OF 31  REGISTRY  COPYRIGHT 2003 ACS
RN   379258-98-7  REGISTRY
CN   Guanidine, N-[(5-azido-6-chloro-3-pyridinyl)methyl]-N'-(methyl-t3)-N''-
     nitro- (9CI)  (CA INDEX NAME)
MF   C8 H6 Cl N8 O2 T3
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LC   STN Files:   CA, CAPLUS
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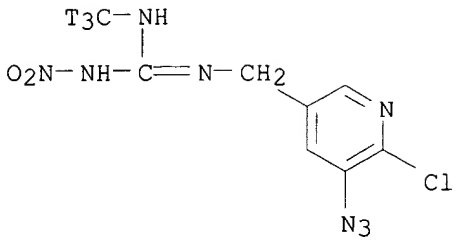

1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 136:16690

L15 ANSWER 2 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **357410-86-7** REGISTRY
CN Benzamide, N-[[[3,5-dichloro-4-(1,1,2,2-tetrafluoroethoxy)phenyl]amino]carbonyl]-2,6-difluoro-, mixt. with (1E)-N-[(6-chloro-3-pyridinyl)methyl]-N'-cyano-N-methylethanimidamide (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Hexaflumuron-acetamiprid mixt.
FS STEREOSEARCH
MF C16 H8 Cl2 F6 N2 O3 . C10 H11 Cl N4
CI MXS
SR CA
LC STN Files: CA, CAPLUS

CM 1

CRN 160430-64-8
CMF C10 H11 Cl N4

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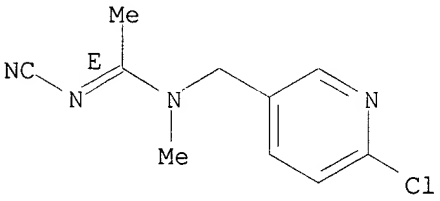

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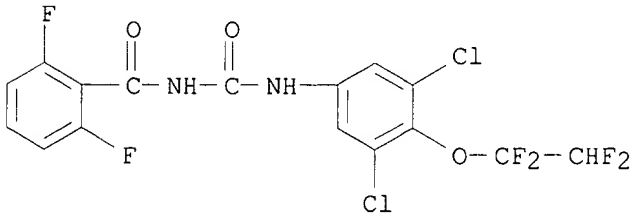
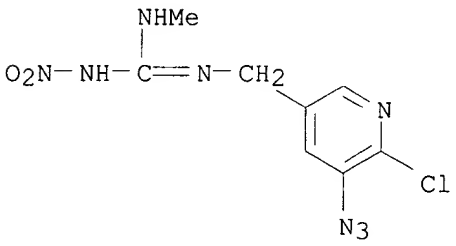


1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:206915

L15 ANSWER 3 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **321845-09-4** REGISTRY
CN Guanidine, N-[(5-azido-6-chloro-3-pyridinyl)methyl]-N'-methyl-N''-nitro-
(9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C8 H9 Cl N8 O2
SR CA
LC STN Files: CA, CAPLUS



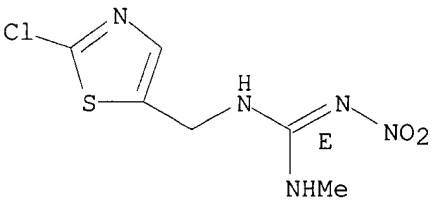
2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 136:16690

REFERENCE 2: 134:127235

L15 ANSWER 4 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **210880-92-5** REGISTRY
CN Guanidine, N-[(2-chloro-5-thiazolyl)methyl]-N'-methyl-N''-nitro-, [C(E)]-
(9CI) (CA INDEX NAME)
OTHER NAMES:
CN Clothianidin
CN TI 435
FS STEREOSEARCH
DR 205510-53-8
MF C6 H8 Cl N5 O2 S
CI COM
SR CA
LC STN Files: BIOSIS, CA, CAPLUS, CASREACT, CBNB, TOXCENTER, USPAT2,
USPATFULL

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

43 REFERENCES IN FILE CA (1962 TO DATE)

5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
44 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 138:149060

REFERENCE 2: 138:132444

REFERENCE 3: 138:68344

REFERENCE 4: 138:34684

REFERENCE 5: 138:20916

REFERENCE 6: 138:20885

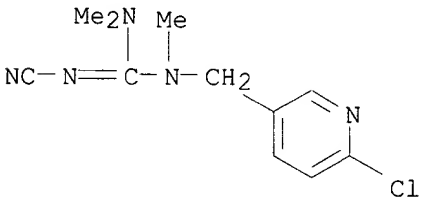
REFERENCE 7: 138:12164

REFERENCE 8: 137:274435

REFERENCE 9: 137:274429

REFERENCE 10: 137:247079

L15 ANSWER 5 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **172333-81-2** REGISTRY
CN Guanidine, N-[(6-chloro-3-pyridinyl)methyl]-N''-cyano-N,N',N'-trimethyl-
(9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C11 H14 Cl N5
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

8 REFERENCES IN FILE CA (1962 TO DATE)
3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
8 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 138:34646

REFERENCE 2: 131:181124

REFERENCE 3: 131:166526

REFERENCE 4: 127:137243

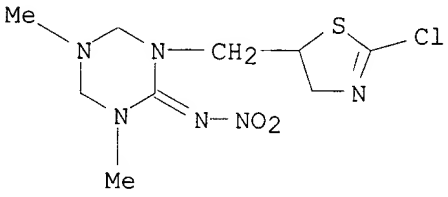
REFERENCE 5: 127:46479

REFERENCE 6: 126:71597

REFERENCE 7: 124:310295

REFERENCE 8: 124:79467

L15 ANSWER 6 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **172333-78-7** REGISTRY
CN 1,3,5-Triazin-2(1H)-imine, 1-[(2-chloro-4,5-dihydro-5-thiazolyl)methyl]tetrahydro-3,5-dimethyl-N-nitro- (9CI) (CA INDEX NAME)
MF C9 H15 Cl N6 O2 S
SR CA
LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

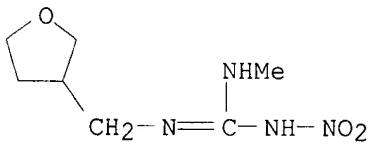


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 124:79467

L15 ANSWER 7 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **165252-70-0** REGISTRY
CN Guanidine, N-methyl-N'-nitro-N''-[(tetrahydro-3-furanyl)methyl]- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Dinotefuran
CN MTI 446
FS 3D CONCORD
DR 222540-72-9
MF C7 H14 N4 O3
CI COM
SR CA
LC STN Files: AGRICOLA, BIOSIS, CA, CAPLUS, CASREACT, CBNB, CIN, MEDLINE, PROMT, TOXCENTER, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

84 REFERENCES IN FILE CA (1962 TO DATE)
7 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
85 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 138:149060

REFERENCE 2: 138:149056

REFERENCE 3: 138:132444

REFERENCE 4: 138:20925

REFERENCE 5: 138:20924

REFERENCE 6: 137:347896

REFERENCE 7: 137:274435

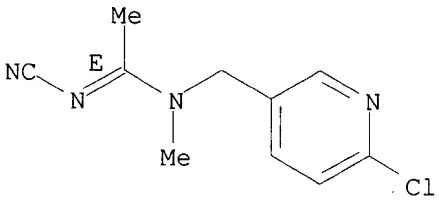
REFERENCE 8: 137:212273

REFERENCE 9: 137:121056

REFERENCE 10: 137:74811

L15 ANSWER 8 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **160430-64-8** REGISTRY
CN Ethanimidamide, N-[(6-chloro-3-pyridinyl)methyl]-N'-cyano-N-methyl-, (1E)-(9CI) (CA INDEX NAME)
OTHER NAMES:
CN Acetamiprid
CN Assail
CN Mospilan
CN NI 25
CN NI 25 (pesticide)
CN Pristine
FS STEREOSEARCH
DR **135410-20-7**
MF C10 H11 Cl N4
CI COM
SR CA
LC STN Files: AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, CA, CAPLUS, CASREACT, CBNB, CHEMLIST, CIN, CSCHEM, MRCK*, PROMT, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

194 REFERENCES IN FILE CA (1962 TO DATE)
25 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
195 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 138:149060

REFERENCE 2: 138:132444

REFERENCE 3: 138:124962

REFERENCE 4: 138:118826

REFERENCE 5: 138:68344

REFERENCE 6: 138:34684

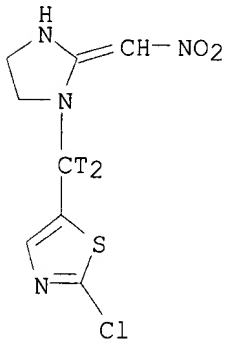
REFERENCE 7: 138:34649

REFERENCE 8: 138:20896

REFERENCE 9: 138:12164

REFERENCE 10: 137:381261

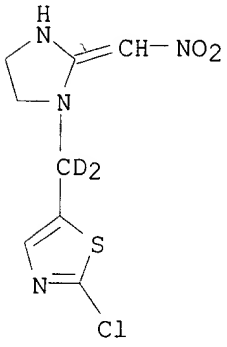
L15 ANSWER 9 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **159694-12-9** REGISTRY
CN Thiazole, 2-chloro-5-[[2-(nitromethylene)-1-imidazolidinyl]methyl-t2]-(9CI) (CA INDEX NAME)
MF C8 H7 Cl N4 O2 S T2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER



1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 122:25832

L15 ANSWER 10 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **159694-11-8** REGISTRY
CN Thiazole, 2-chloro-5-[[2-(nitromethylene)-1-imidazolidinyl]methyl-d2]-(9CI) (CA INDEX NAME)
MF C8 H7 Cl D2 N4 O2 S
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

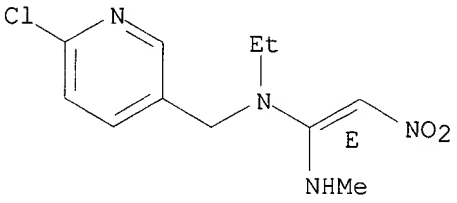


1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 122:25832

L15 ANSWER 11 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **150824-47-8** REGISTRY
CN 1,1-Ethenediamine, N-[(6-chloro-3-pyridinyl)methyl]-N-ethyl-N'-methyl-2-nitro-, (1E)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1,1-Ethenediamine, N-[(6-chloro-3-pyridinyl)methyl]-N-ethyl-N'-methyl-2-nitro-, (E)-
OTHER NAMES:
CN (E)-Nitenpyram
CN Nitenpyram
CN TI 304
FS STEREOSEARCH
MF C11 H15 Cl N4 O2
CI COM
SR CAS Registry Services
LC STN Files: AGRICOLA, BIOBUSINESS, BIOSIS, CA, CAPLUS, CBNB, CIN, MRCK*, PROMT, RTECS*, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: WHO

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

86 REFERENCES IN FILE CA (1962 TO DATE)
13 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
88 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 138:149060

REFERENCE 2: 138:149056

REFERENCE 3: 138:132444

REFERENCE 4: 138:118826

REFERENCE 5: 138:34684

REFERENCE 6: 138:12164

REFERENCE 7: 137:364868

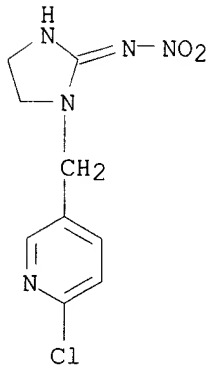
REFERENCE 8: 137:347896

REFERENCE 9: 137:334257

REFERENCE 10: 137:290159

L15 ANSWER 12 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **138261-41-3** REGISTRY

CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1-[(6-Chloro-3-pyridinyl)methyl]-4,5-dihydro-N-nitro-1H-imidazol-2-amine
CN 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine
CN Admire
CN Advantage Flea Adulticide
CN BAY-NTN 33893
CN Confidor
CN Confidor 200SL
CN Confidor SL
CN CP 1
CN Gaucho
CN Imidacloprid
CN Merit
CN Merit (insecticide)
CN NTN 33893
CN NTN 33893-240FS
CN Provado
AR 105827-78-9
MF C9 H10 Cl N5 O2
CI COM
SR CAS Registry Services
LC STN Files: AGRICOLA, AQUIRE, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN, EMBASE, MEDLINE, NIOSHTIC, PROMT, RTECS*, TOXCENTER, ULIDAT, USPAT2, USPATFULL, VETU
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1087 REFERENCES IN FILE CA (1962 TO DATE)
60 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1091 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 138:158105

REFERENCE 2: 138:149060

REFERENCE 3: 138:149056

REFERENCE 4: 138:149034

REFERENCE 5: 138:149016

REFERENCE 6: 138:132585

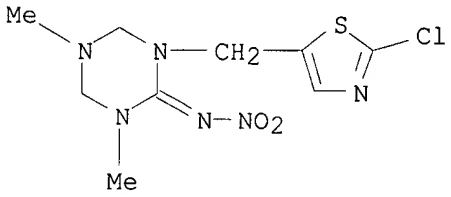
REFERENCE 7: 138:132552

REFERENCE 8: 138:132444

REFERENCE 9: 138:118823

REFERENCE 10: 138:102386

L15 ANSWER 13 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **136516-19-3** REGISTRY
CN 1,3,5-Triazin-2(1H)-imine, 1-[(2-chloro-5-thiazolyl)methyl]tetrahydro-3,5-dimethyl-N-nitro- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN AKD 1022
DR 222540-36-5
MF C9 H13 Cl N6 O2 S
CI COM
SR CA
LC STN Files: CA, CAPLUS, CASREACT, TOXCENTER, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

24 REFERENCES IN FILE CA (1962 TO DATE)
6 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
24 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:368021

REFERENCE 2: 135:257232

REFERENCE 3: 135:1674

REFERENCE 4: 134:262335

REFERENCE 5: 133:306673

REFERENCE 6: 133:39469

REFERENCE 7: 131:347885

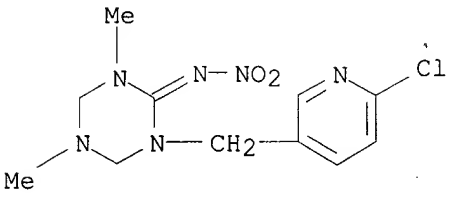
REFERENCE 8: 131:224885

REFERENCE 9: 131:181124

REFERENCE 10: 131:166526

L15 ANSWER 14 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **136516-18-2** REGISTRY
CN 1,3,5-Triazin-2(1H)-imine, 1-[(6-chloro-3-pyridinyl)methyl]tetrahydro-3,5-dimethyl-N-nitro- (9CI) (CA INDEX NAME)

MF C11 H15 Cl N6 O2
CI COM
SR CA
LC STN Files: CA, CAPLUS, CASREACT, TOXCENTER, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

21 REFERENCES IN FILE CA (1962 TO DATE)
3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
21 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:257232

REFERENCE 2: 133:306673

REFERENCE 3: 131:181124

REFERENCE 4: 131:166526

REFERENCE 5: 130:252253

REFERENCE 6: 130:222993

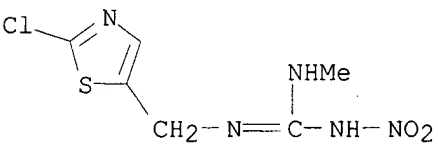
REFERENCE 7: 129:290052

REFERENCE 8: 127:137243

REFERENCE 9: 127:46479

REFERENCE 10: 126:71597

L15 ANSWER 15 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **131748-59-9** REGISTRY
CN Guanidine, N-[(2-chloro-5-thiazolyl)methyl]-N'-methyl-N''-nitro- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN CGA 322704
FS 3D CONCORD
MF C6 H8 Cl N5 O2 S
CI COM
SR CA
LC STN Files: CA, CAPLUS, CASREACT, TOXCENTER, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

46 REFERENCES IN FILE CA (1962 TO DATE)
4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
46 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:381258

REFERENCE 2: 137:368863

REFERENCE 3: 137:337879

REFERENCE 4: 135:257232

REFERENCE 5: 135:176718

REFERENCE 6: 135:61323

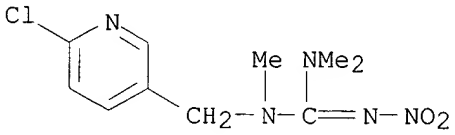
REFERENCE 7: 135:45384

REFERENCE 8: 135:32895

REFERENCE 9: 134:262335

REFERENCE 10: 134:251392

L15 ANSWER 16 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **131748-55-5** REGISTRY
CN Guanidine, N-[(6-chloro-3-pyridinyl)methyl]-N,N',N'-trimethyl-N''-nitro-
(9CI) (CA INDEX NAME)
MF C10 H14 Cl N5 O2
CI COM
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

17 REFERENCES IN FILE CA (1962 TO DATE)
4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
17 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 131:181124

REFERENCE 2: 131:166526

REFERENCE 3: 127:137243

REFERENCE 4: 127:46479

REFERENCE 5: 126:71597

REFERENCE 6: 124:310295

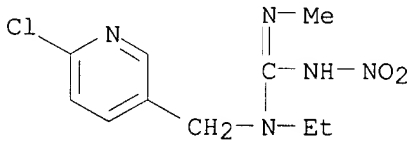
REFERENCE 7: 124:79467

REFERENCE 8: 124:809

REFERENCE 9: 120:191147

REFERENCE 10: 117:48541

L15 ANSWER 17 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **131748-54-4** REGISTRY
CN Guanidine, N-[(6-chloro-3-pyridinyl)methyl]-N-ethyl-N'-methyl-N''-nitro-(9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C10 H14 Cl N5 O2
CI COM
SR CA
LC STN Files: CA, CAPLUS, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

14 REFERENCES IN FILE CA (1962 TO DATE)
5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
14 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:368021

REFERENCE 2: 131:347885

REFERENCE 3: 131:181124

REFERENCE 4: 131:166526

REFERENCE 5: 127:46479

REFERENCE 6: 126:71597

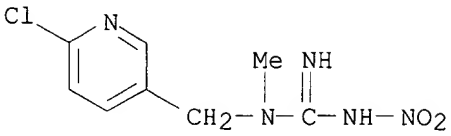
REFERENCE 7: 124:79467

REFERENCE 8: 116:214354

REFERENCE 9: 116:21040

REFERENCE 10: 115:201145

L15 ANSWER 18 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **131748-49-7** REGISTRY
CN Guanidine, N-[(6-chloro-3-pyridinyl)methyl]-N-methyl-N'-nitro- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C8 H10 Cl N5 O2
SR CA
LC STN Files: CA, CAPLUS, CASREACT, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

14 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
14 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 131:181124

REFERENCE 2: 131:166526

REFERENCE 3: 126:71597

REFERENCE 4: 124:79467

REFERENCE 5: 120:191147

REFERENCE 6: 119:49231

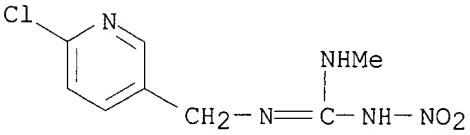
REFERENCE 7: 118:59590

REFERENCE 8: 116:214354

REFERENCE 9: 116:21040

REFERENCE 10: 115:280003

L15 ANSWER 19 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **131748-47-5** REGISTRY
CN Guanidine, N-[(6-chloro-3-pyridinyl)methyl]-N'-methyl-N''-nitro- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C8 H10 Cl N5 O2
CI COM
SR CA
LC STN Files: CA, CAPLUS, CASREACT, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

30 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
30 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 136:16690

REFERENCE 2: 135:257232

REFERENCE 3: 133:350163

REFERENCE 4: 133:306673

REFERENCE 5: 132:107710

REFERENCE 6: 131:181124

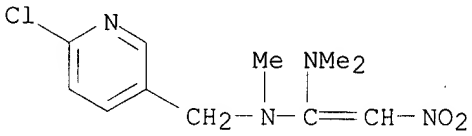
REFERENCE 7: 131:166526

REFERENCE 8: 130:252253

REFERENCE 9: 130:222993

REFERENCE 10: 130:182487

L15 ANSWER 20 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **120738-88-7** REGISTRY
CN 1,1-Ethenediamine, N-[(6-chloro-3-pyridinyl)methyl]-N,N',N'-trimethyl-2-nitro- (9CI) (CA INDEX NAME)
MF C11 H15 Cl N4 O2
CI COM
SR CA
LC STN Files: CA, CAPLUS, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

13 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
13 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 131:181124

REFERENCE 2: 131:166526

REFERENCE 3: 129:4587

REFERENCE 4: 126:71597

REFERENCE 5: 124:79467

REFERENCE 6: 121:198499

REFERENCE 7: 120:270122

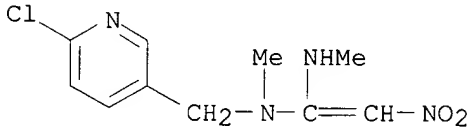
REFERENCE 8: 119:139023

REFERENCE 9: 115:201145

REFERENCE 10: 115:87524

L15 ANSWER 21 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **120738-59-2** REGISTRY

CN 1,1-Ethenediamine, N-[(6-chloro-3-pyridinyl)methyl]-N,N'-dimethyl-2-nitro-
(9CI) (CA INDEX NAME)
FS 3D CONCORD
DR 138085-72-0
MF C10 H13 Cl N4 O2
CI COM
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

26 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
26 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 133:85574

REFERENCE 2: 132:344438

REFERENCE 3: 131:253657

REFERENCE 4: 129:4587

REFERENCE 5: 124:79467

REFERENCE 6: 121:198499

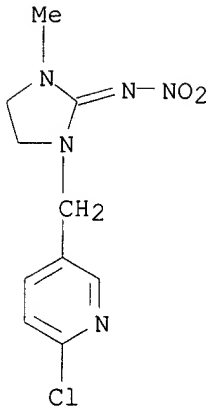
REFERENCE 7: 120:270122

REFERENCE 8: 120:156735

REFERENCE 9: 119:154033

REFERENCE 10: 119:139023

L15 ANSWER 22 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **117906-15-7** REGISTRY
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-3-methyl-N-nitro-
(9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C10 H12 Cl N5 O2
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, RTECS*, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

25 REFERENCES IN FILE CA (1962 TO DATE)
25 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:290159

REFERENCE 2: 136:243306

REFERENCE 3: 135:284510

REFERENCE 4: 134:158841

REFERENCE 5: 133:85574

REFERENCE 6: 133:13702

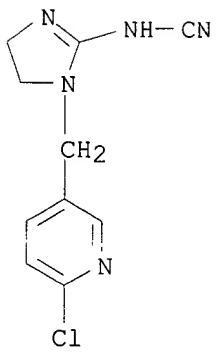
REFERENCE 7: 132:344438

REFERENCE 8: 130:277994

REFERENCE 9: 130:263504

REFERENCE 10: 130:233620

L15 ANSWER 23 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **111988-43-3** REGISTRY
CN Cyanamide, [1-[(6-chloro-3-pyridinyl)methyl]-4,5-dihydro-1H-imidazol-2-yl]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C10 H10 Cl N5
CI COM
SR CA
LC STN Files: CA, CAPLUS, CASREACT, RTECS*, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

29 REFERENCES IN FILE CA (1962 TO DATE)
4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
29 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:290159

REFERENCE 2: 133:85574

REFERENCE 3: 132:344438

REFERENCE 4: 131:181124

REFERENCE 5: 131:166526

REFERENCE 6: 131:102279

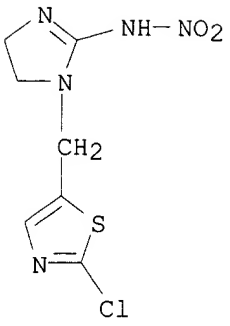
REFERENCE 7: 130:277994

REFERENCE 8: 130:263504

REFERENCE 9: 130:77436

REFERENCE 10: 129:157935

L15 ANSWER 24 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **105843-36-5** REGISTRY
CN 1H-Imidazol-2-amine, 1-[(2-chloro-5-thiazolyl)methyl]-4,5-dihydro-N-nitro-
(9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C7 H8 Cl N5 O2 S
CI COM
SR CA
LC STN Files: CA, CAPLUS, CASREACT, TOXCENTER, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
12 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 133:306673

REFERENCE 2: 131:181124

REFERENCE 3: 131:166526

REFERENCE 4: 131:102279

REFERENCE 5: 129:136162

REFERENCE 6: 129:95484

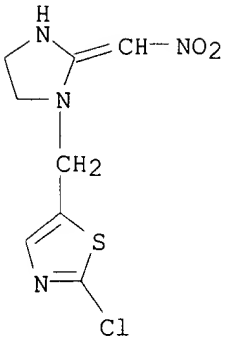
REFERENCE 7: 124:79467

REFERENCE 8: 118:163054

REFERENCE 9: 114:19411

REFERENCE 10: 110:135257

L15 ANSWER 25 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **105828-97-5** REGISTRY
CN Thiazole, 2-chloro-5-[[2-(nitromethylene)-1-imidazolidinyl]methyl]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C8 H9 Cl N4 O2 S
CI COM
SR CA
LC STN Files: CA, CAPLUS, CASREACT, RTECS*, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

19 REFERENCES IN FILE CA (1962 TO DATE)
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REFERENCE 2: 132:344438

REFERENCE 3: 131:181124

REFERENCE 4: 131:166526

REFERENCE 5: 131:84166

REFERENCE 6: 130:77436

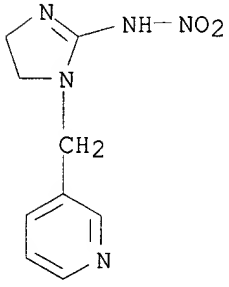
REFERENCE 7: 128:214403

REFERENCE 8: 128:85429

REFERENCE 9: 128:58573

REFERENCE 10: 124:79467

L15 ANSWER 26 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **105828-05-5** REGISTRY
CN 1H-Imidazol-2-amine, 4,5-dihydro-N-nitro-1-(3-pyridinylmethyl)- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C9 H11 N5 O2
SR CA
LC STN Files: CA, CAPLUS, RTECS*, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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14 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 133:85574

REFERENCE 2: 132:344438

REFERENCE 3: 130:77436

REFERENCE 4: 128:85429

REFERENCE 5: 128:58573

REFERENCE 6: 124:809

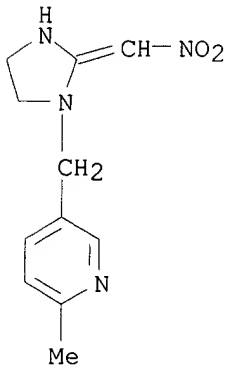
REFERENCE 7: 123:77111

REFERENCE 8: 122:233307

REFERENCE 9: 121:295041

REFERENCE 10: 119:153987

L15 ANSWER 27 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **101990-37-8** REGISTRY
CN Pyridine, 2-methyl-5-[[2-(nitromethylene)-1-imidazolidinyl]methyl]- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 6-methyl-PMNI
FS 3D CONCORD
MF C11 H14 N4 O2
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, CHEMCATS, RTECS*, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

20 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
20 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:30266

REFERENCE 2: 133:330893

REFERENCE 3: 133:85574

REFERENCE 4: 132:344438

REFERENCE 5: 130:77436

REFERENCE 6: 128:214403

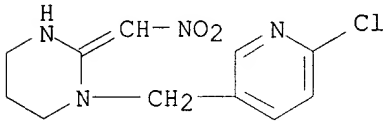
REFERENCE 7: 128:85429

REFERENCE 8: 128:58573

REFERENCE 9: 124:809

REFERENCE 10: 123:77111

L15 ANSWER 28 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **101336-64-5** REGISTRY
CN Pyrimidine, 1-[(6-chloro-3-pyridinyl)methyl]hexahydro-2-(nitromethylene)-
(9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C11 H13 Cl N4 O2
CI COM
SR CA
LC STN Files: CA, CAPLUS, CASREACT, CHEMCATS, RTECS*, TOXCENTER, USPAT2,
USPATFULL
(*File contains numerically searchable property data)



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3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
28 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:290159

REFERENCE 2: 137:42943

REFERENCE 3: 136:130094

REFERENCE 4: 134:26488

REFERENCE 5: 133:85574

REFERENCE 6: 132:344438

REFERENCE 7: 131:181124

REFERENCE 8: 131:166526

REFERENCE 9: 131:84166

REFERENCE 10: 131:77954

L15 ANSWER 29 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **101336-63-4** REGISTRY
CN Pyridine, 2-chloro-5-[[2-(nitromethylene)-1-imidazolidinyl]methyl]- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 6-chloro-PMNI
CN WL 134263
FS 3D CONCORD
MF C10 H11 Cl N4 O2
CI COM
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, CHEMCATS, RTECS*, TOXCENTER, USPAT2, USPATFULL
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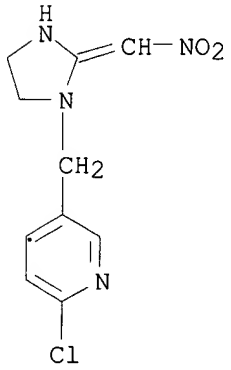


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

74 REFERENCES IN FILE CA (1962 TO DATE)
6 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
73 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:290159

REFERENCE 2: 137:121044

REFERENCE 3: 137:42943

REFERENCE 4: 135:284510

REFERENCE 5: 135:191645

REFERENCE 6: 135:30266

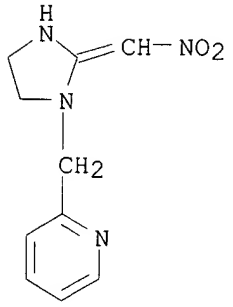
REFERENCE 7: 135:30264

REFERENCE 8: 133:330893

REFERENCE 9: 133:85574

REFERENCE 10: 132:344438

L15 ANSWER 30 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **100553-57-9** REGISTRY
CN Pyridine, 2-[[2-(nitromethylene)-1-imidazolidinyl]methyl]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C10 H12 N4 O2
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, RTECS*, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

10 REFERENCES IN FILE CA (1962 TO DATE)
10 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 133:85574

REFERENCE 2: 132:344438

REFERENCE 3: 130:77436

REFERENCE 4: 128:214403

REFERENCE 5: 128:58573

REFERENCE 6: 123:77111

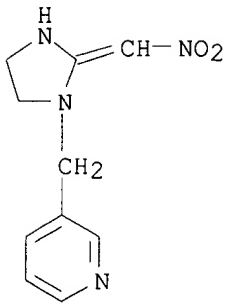
REFERENCE 7: 121:295041

REFERENCE 8: 119:153987

REFERENCE 9: 119:111240

REFERENCE 10: 104:109672

L15 ANSWER 31 OF 31 REGISTRY COPYRIGHT 2003 ACS
RN **100553-56-8** REGISTRY
CN Pyridine, 3-[[2-(nitromethylene)-1-imidazolidinyl]methyl]- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN PMNI
FS 3D CONCORD
MF C10 H12 N4 O2
SR CA
LC STN Files: AGRICOLA, BEILSTEIN*, CA, CAPLUS, CHEMCATS, RTECS*, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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24 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:30266

REFERENCE 2: 133:330893

REFERENCE 3: 133:85574

REFERENCE 4: 132:344438

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REFERENCE 9: 124:809

REFERENCE 10: 123:77111

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FILE 'HCAPLUS' ENTERED AT 15:23:12 ON 13 MAR 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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FILE COVERS 1907 - 13 Mar 2003  VOL 138 ISS 11
FILE LAST UPDATED: 12 Mar 2003  (20030312/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


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L9              STR
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L13         1574 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L12
L14           44 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L13 AND (FLY OR FLIES)
L21           27 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L13 AND HOUSEFL?
L22           18 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L21 NOT L14
L24           20 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L13 AND (MUSCA OR DOMESTICA)
L25           14 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L24 NOT L14
L26           19 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L22 OR L25


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L26  ANSWER 1 OF 19  HCAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:        2002:325415  HCAPLUS
DOCUMENT NUMBER:         137:42943
TITLE:                   Nicotinic acetylcholine receptor binding of
                         imidacloprid-related diaza compounds with various ring
                         sizes and their insecticidal activity against
                         Musca domestica
AUTHOR(S):               Kagabu, Shinzo; Nishiwaki, Hisashi; Sato, Kazuyuki;
                         Hibi, Manabu; Yamaoka, Nahato; Nakagawa, Yoshiaki
CORPORATE SOURCE:        Department of Chemistry, Faculty of Education, Gifu
                         University, Gifu, 501-1193, Japan
SOURCE:                  Pest Management Science (2002), 58(5), 483-490
                         CODEN: PMSCFC; ISSN: 1526-498X
PUBLISHER:               John Wiley & Sons Ltd.
DOCUMENT TYPE:           Journal
LANGUAGE:                English
OTHER SOURCE(S):         CASREACT 137:42943
```

AB Fifteen 5-substituted 1-(6-chloro-3-pyridylmethyl)-2-nitromethylene-1,3-diazacyclohexanes and 3 other related compds. having a five- or seven-membered ring were synthesized and their biol. activities were measured in vivo and in vitro. The insecticidal (in vivo) activity was evaluated against **houseflies Musca domestica** under synergistic conditions with propargyl Pr phenylphosphonate and piperonyl butoxide. The binding activity of each compd. to nicotinic acetylcholine receptor in vitro was measured using [125I].alpha.-bungarotoxin. The insecticidal activities of the unsubstituted diazacyclohexane analogs were slightly higher than those of the imidazolidine analogs, but the enlargement of ring size to diazacycloheptane lowered the activity. Substitution of 1,3-diazacyclohexane or imidazolidine rings was not generally favorable for the activity, but the unsubstituted 1,3-diazacyclohexane analog showed the highest binding activity. Ring substitutions and ring enlargement decreased the activity 100-30000-fold.

IT **101336-63-4P 101336-64-5P 138261-41-3P,** Imidacloprid
RL: BCP (Biochemical process); BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(prepn. of imidacloprid-related diaza compds. and their nicotinic acetylcholine receptor binding activity and insecticidal activity against **Musca domestica**)

REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 2 OF 19 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:669974 HCAPLUS
DOCUMENT NUMBER: 135:284510
TITLE: Insecticidal and binding activities of N3-substituted imidacloprid derivatives against the **housefly Musca domestica** and the .alpha.-bungarotoxin binding sites of nicotinic acetylcholine receptors
AUTHOR(S): Nishiwaki, Hisashi; Nakagawa, Yoshiaki; Ueno, Tamio; Kagabu, Shinzo; Nishimura, Keiichiro
CORPORATE SOURCE: Graduate School of Agriculture, Kyoto University, Kyoto, 606-8502, Japan
SOURCE: Pest Management Science (2001), 57(9), 810-814
CODEN: PMSCFC; ISSN: 1526-498X
PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB N3-substituted imidacloprid congeners contg. C1-C6 alkyl groups or various analogous groups, and their corresponding nitromethylene analogs, were used in this study. Their insecticidal activity against the **housefly, Musca domestica,** and their binding activity toward the nicotinic acetylcholine receptor were detd. The insecticidal test was conducted using the synergists piperonyl butoxide and propargyl Pr phenylphosphonate. The binding assay was performed with **housefly** head membrane prepns. using radio-labeled .alpha.-bungarotoxin. Both insecticidal and binding activities were drastically lowered by the introduction of alkyl/allyl groups at the imidazolidine NH sites of both nitroimino and nitromethylene compds. The binding activity of N3-substituted nitromethylene analogs was much higher than that of the corresponding nitroimino analogs. However, the insecticidal activity of both series of compds. with a given substituent was nearly identical. The insecticidal activity correlated pos. with the binding activity after taking into account the structural difference of the nitroimino and nitromethylene moieties and a structural feature of the N3-substituents.

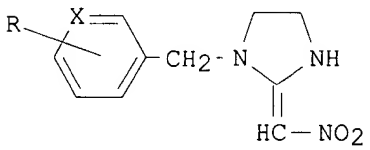
IT **101336-63-4 105828-07-7 105828-25-9**

105828-28-2 105845-31-6 117906-15-7
117906-16-8 131607-68-6 131607-69-7
131607-70-0 131607-72-2 138261-41-3
181066-34-2 211229-64-0 211229-65-1
211229-66-2 211229-67-3 221347-65-5
343581-16-8 343581-17-9 343581-18-0
343581-19-1 343581-21-5 343581-22-6
343581-23-7 343581-24-8
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(insecticidal and binding activities of N3-substituted imidacloprid derivs. against **housefly** and the .alpha.-bungarotoxin binding sites of nicotinic acetylcholine receptors)
REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 3 OF 19 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:493021 HCAPLUS
DOCUMENT NUMBER: 136:243278
TITLE: Field evaluation of non-pesticide chemicals as honey bee repellents
AUTHOR(S): Mayer, D. F.; Lunden, J. D.; Kovacs, G.; Miliczky, E. R.
CORPORATE SOURCE: Department of Entomology, Irrigated Agriculture Research & Extension Center, Washington State University, Prosser, WA, 99350, USA
SOURCE: Colloques - Institut National de la Recherche Agronomique (2001), 98(Hazards of Pesticides to Bees), 159-168
CODEN: COLIEZ; ISSN: 0293-1915
PUBLISHER: Institut National de la Recherche Agronomique
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Bee poisoning from pesticides is a serious problem worldwide. Major concern exists for the safety of honey bees (Apis mellifera L.) as valuable pollinators of many horticultural crops. One way of reducing the pesticide hazard to bees is to apply a chem. repellent that will discourage bees from foraging on crops for an interval after a bee hazard pesticide has been applied. During 1990-1998, the authors conducted field tests on blooming apples (Malus **domestica** Borkh.), dandelions (Taraxacum officinale G. Weber, in Wiggers), buckwheat (officinale) and white Dutch clover (officinale) plants to evaluate their repellent effect to foraging honey bees. Evaluations were made by slowly walking through the plots and counting the no. of honey bees (30 s/6.7 m/0.91 m swath) except for apples where they were counted by slowly moving around and counting the no. of honey bees (30 s/1 tree) at 1 and 4 h. after application. The authors evaluated about 240 non-pesticide chems. Eleven chems. significantly reduced the no. of honey bee foragers at 1 h. after application but not at 4 h. In some tests, but not all, 10 chems. significantly reduced the no. of honey bee foragers at 1 h. after application but not at 4 h. One chem. significantly reduced the no. of honey bee foragers at 1 h. and 4 h. after application. In some tests, but not all, 2 chems. significantly reduced the no. of honey bee foragers at 4 h. after application but not at 1 h.
IT **138261-41-3**, NTN 33893-240FS
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(field evaluation of non-pesticide chems. as honey bee repellents)
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 4 OF 19 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:162131 HCAPLUS
DOCUMENT NUMBER: 135:30266
TITLE: Effects of synergists on the insecticidal activity of chloronicotinyl-related benzyl compounds against **houseflies**
AUTHOR(S): Nishiwaki, Hisashi; Nakagawa, Yoshiaki; Ueno, Tamio; Nishimura, Keiichiro
CORPORATE SOURCE: Grad. Sch. Agric., Kyoto Univ., Kyoto, 606-8502, Japan
SOURCE: Nippon Noyaku Gakkaishi (2001), 26(1), 91-92
CODEN: NNGADV; ISSN: 0385-1559
PUBLISHER: Nippon Noyaku Gakkai
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I X=CH
II X=N

AB Fourteen 1-benzyl-2-(nitromethylene)imidazolidine derivs. (I; R = H, 2-, 3-, or 4-F, 2-, 3-, or 4-Cl, 3- or 4-Me, 3-NO2 or 3-CN, 3,4-F2, 3,4-Cl2, 3-NO2, 4-CH3, etc.), 3 1-(3-pyridyl)methyl-2-(nitromethylene)imidazolidine derivs. (II; R = H, 6-Cl or 6-Me), acetamiprid (III), and imidacloprid (IV) were tested for their insecticidal activities toward 3- to 6-day-old female **houseflies** by injection after topical application of propargyl Pr phenyl-phosphonate (V) with or without piperonyl butoxide (VI). Addn. of VI caused 3- to 40-fold increases in the insecticidal activities of 8 I and 1 II, but affected those of other I and II, III, and IV little. Median effective concns. of I and II in the presence of V and VI were almost linearly and better correlated with their binding activities to the nicotinic acetylcholine receptor than those obtained without VI, indicating that both V and VI should be used as synergists for the anal. of these 2 activities.

IT **100553-56-8 101336-63-4 101990-37-8 120983-76-8 138261-41-3**, Imidacloprid **160430-64-8**, Acetamiprid
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(effects of synergists on insecticidal activity of chloronicotinyl-related benzyl compds. against **houseflies**)

L26 ANSWER 5 OF 19 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:728148 HCAPLUS
DOCUMENT NUMBER: 133:330893
TITLE: Binding activity of substituted benzyl derivatives of chloronicotinyl insecticides to **housefly** -head membranes, and its relationship to insecticidal activity against the **housefly Musca domestica**
AUTHOR(S): Nishiwaki, Hisashi; Nakagawa, Yoshiaki; Takeda, David Y.; Okazawa, Atsushi; Akamatsu, Miki; Miyagawa, Hisashi; Ueno, Tamio; Nishimura, Keiichiro
CORPORATE SOURCE: Graduate School of Agriculture, Kyoto University, Kyoto, 606-8502, Japan
SOURCE: Pest Management Science (2000), 56(10), 875-881
CODEN: PMSCFC; ISSN: 1526-498X
PUBLISHER: John Wiley & Sons Ltd.

DOCUMENT TYPE: Journal
LANGUAGE: English
AB Variously substituted benzyl derivs. of chloronicotinyl insecticides were synthesized with a wide range of substituents, including halogens, NO2, CN, CF3 and small alkyl and alkoxy groups at the ortho, meta and para positions, as well as multiple-substituted benzyl analogs. Their binding activity to the .alpha.-bungarotoxin binding site in **housefly** (**Musca domestica**) head membrane prepns. was measured. Among the compds. tested, the activity of the meta-CN deriv. was the highest, being 20-100 times higher than those of imidacloprid, acetamiprid and nitenpyram. The synergized insecticidal activity against **houseflies** was also measured for selected compds. with the metabolic inhibitor, NIA16388 (propargyl Pr phenylphosphonate). For the nitromethylene analogs, including both benzyl and pyridylmethyl analogs, higher binding activity usually resulted in higher insecticidal activity.
IT **100553-56-8 101336-63-4 101990-37-8**
138261-41-3, Imidacloprid **150824-47-8**, Nitenpyram
160430-64-8, Acetamiprid
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(**housefly** insecticide and binding to **housefly** head membrane .alpha.-bungarotoxin binding site)
IT **120983-76-8P 303185-43-5P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. as insecticide and binding to **housefly** head membrane .alpha.-bungarotoxin binding site)
REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 6 OF 19 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:618833 HCAPLUS
DOCUMENT NUMBER: 133:306673
TITLE: Insect nicotinic acetylcholine receptor: conserved neonicotinoid specificity of [3H]imidacloprid binding site
AUTHOR(S): Zhang, Aiguo; Kayser, Hartmut; Maienfisch, Peter; Casida, John E.
CORPORATE SOURCE: Environmental Chemistry and Toxicology Laboratory, Department of Environmental Science, Policy, University of California, Berkeley, CA, 94720-3112, USA
SOURCE: Journal of Neurochemistry (2000), 75(3), 1294-1303
CODEN: JONRA9; ISSN: 0022-3042
PUBLISHER: Lippincott Williams & Wilkins
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The insect nicotinic acetylcholine receptor (nAChR) is a major target for insecticide action. The rapidly expanding use of neonicotinoid insecticides of varied structures makes it increasingly important to define similarities and differences in their action, particularly for the first-generation chloropyridinyl compds. vs. the second-generation chlorothiazolyl derivs. We have shown with **Musca domestica** that a convenient and relevant detn. of the neonicotinoid insecticide target is a binding site assay with [3H]imidacloprid ([3H]IMI). This study uses membranes from the aphids Myzus persicae and Aphis craccivora and from heads of the files Drosophila melanogaster and **Musca domestica** to characterize the [3H]IMI binding sites relative to their no. and possible species variation in structure-activity relationships. With emphasis on com. neonicotinoids, six potent chloropyridinyl compds. are compared with the

corresponding six chlorothiazolyl analogs (syntheses are given for chems. prepd. differently than previously described). The preference for chloropyridinyl vs. chlorothiazolyl is not dependent on the insect species examd. but instead on other structural features of the mol. The chlorothiazolyl substituent generally confers higher potency in the clothianidin and desmethylthiamethoxam series and the chloropyridinyl moiety in the imidacloprid, thiacloprid, acetamiprid, and nitenpyram series. Two chlorothiazolyl compds. compete directly with the chloropyridinyl [3H]IMI for the same binding sites in Myzus and Drosophila membranes. This study shows conserved neonicotinoid specificity of the [3H]IMI binding site in each of the four insect species examd.

IT **131748-66-8 136516-19-3**, AKD-1022 **138261-41-3**, CP 1 **150824-47-8**, Nitenpyram **160430-64-8**, Acetamiprid **165252-70-0**, MTI-446 **210880-92-5**, Clothianidin
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)
(conserved neonicotinoid specificity of [3H]imidacloprid binding site in insect nicotinic acetylcholine receptor)

IT **105843-36-5P**, CT 1 **131748-47-5P**, CP 4 **135410-92-3P 136516-18-2P**
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
(conserved neonicotinoid specificity of [3H]imidacloprid binding site in insect nicotinic acetylcholine receptor)

IT **135410-91-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate in prepn. of neonicotinoid insecticides)

REFERENCE COUNT: 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 7 OF 19 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:367419 HCAPLUS
DOCUMENT NUMBER: 133:85574
TITLE: Three-dimensional quantitative structure-activity relationship analysis of acyclic and cyclic chloronicotinyl insecticides
AUTHOR(S): Okazawa, Atsushi; Akamatsu, Miki; Nishiwaki, Hisashi; Nakagawa, Yoshiaki; Miyagawa, Hisashi; Nishimura, Keiichiro; Ueno, Tamio
CORPORATE SOURCE: Graduate School of Agriculture, Kyoto University, Kyoto, 606-8502, Japan
SOURCE: Pest Management Science (2000), 56(6), 509-515
CODEN: PMSCFC; ISSN: 1526-498X
PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

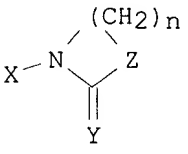
AB The binding activity of chloronicotinyl insecticides, including acetamiprid, nitenpyram and related compds., to the nicotinic acetylcholine receptors (nAChR) of **houseflies** was measured. These compds. were defined as "acyclic" compds. Variations in the binding activity were analyzed using comparative mol. field anal. (CoMFA) which is a technique for the anal. of three-dimensional quant. structure-activity relationships. The CoMFA results showed that steric interactions were more significant for the acyclic compds. than for imidacloprid and its derivs. (cyclic compds.). Also, the acyclic compds. could bind to **housefly**-nAChR in a similar manner to the cyclic compds., and that the electrostatic natures of the acyclic amino- and cyclic imdazolidine-moieties affected their binding activity.

IT **100553-56-8 100553-57-9 101336-63-4**

101336-64-5 101990-37-8 105828-05-5
105828-97-5 111988-43-3 117906-15-7
120738-59-2 120739-03-9 120739-05-1
120739-08-4 135159-28-3 138261-41-3,
Imidacloprid **149019-57-8 149019-66-9**
149019-67-0 150824-47-8, Nitenpyram **153909-65-0**
160430-64-8, Acetamiprid
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(three-dimensional QSAR anal. of acyclic and cyclic chloronicotinyl insecticides)

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 8 OF 19 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:181485 HCAPLUS
DOCUMENT NUMBER: 132:344438
TITLE: Comparison of the binding activities of chloronicotinyl insecticides toward the nicotinic acetylcholine receptors from rats and **houseflies**
AUTHOR(S): Okazawa, Atsushi; Nakagawa, Yoshiaki; Akamatsu, Miki; Ueno, Tamio; Nishimura, Keiichiro
CORPORATE SOURCE: Grad. Sch. Agric., Kyoto Univ., Kyoto, 606-8502, Japan
SOURCE: Nippon Noyaku Gakkaishi (2000), 25(1), 40-43
CODEN: NNGADV; ISSN: 0385-1559
PUBLISHER: Nippon Noyaku Gakkai
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



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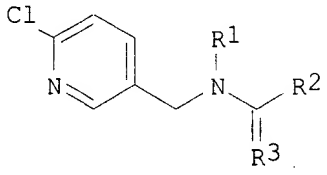


II

AB Nineteen I (X = 2-, 3-, or 4-pyridylmethyl, 6-chloro-3-pyridylmethyl, etc.; Y = CHNO2, NNO2, NCN, or CHCN; Z = NH, NMe, CH2, O, or S; n = 2 or 3) and 13 II (R1 = H, Me, Et, Pr, isoPr, or CH2FCH2; R2 = NH2, Me2NNH, MeNH, EtNH, cyclopropylamino, 1-pyrrolidinyl, or Me; R3 = CH2NO2 or NCN) were tested for their binding activities toward nicotinic acetylcholine receptors from rat brains and **housefly** heads by the previously described method (Okazawa, A.; Akamatsu, M.; Ohoka, A.; Nishiwaki, H.; Cho, W.-J.; Nakagawa, Y.; Nishimura, K.; Ueno, T., 1998) with [125I].alpha.-bungarotoxin. All the compds. tested had high binding activities to the **housefly** receptor, whereas only 21 compds. had binding activities to the receptor. The activities to the rat receptor were much lower than resp. activities to the insect receptor. The binding activities to the rat prepn. corresponded to their toxicities to rats (Yamamoto, I., 1996). Results indicated that selectivity of these chloronicotinyl insecticides could be explained by the difference in the binding activities between insects and rats.

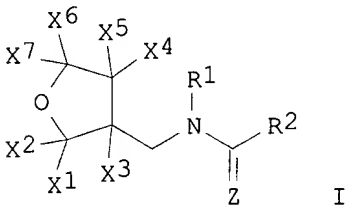
IT **100553-56-8 100553-57-9 101336-63-4**
101336-64-5 101990-37-8 105828-05-5
105828-97-5 111988-43-3 117906-15-7
120738-59-2 120739-03-9 120739-05-1
120739-08-4 135159-28-3 138261-41-3,
Imidacloprid **149019-57-8 149019-66-9**

149019-67-0 150824-47-8, Nitenpyram **153909-65-0 160430-64-8**, Acetamiprid
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(comparison of binding activities of chloronicotinyl insecticides toward nicotinic acetylcholine receptors from rats and **houseflies**)

L26 ANSWER 9 OF 19 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:747367 HCAPLUS
DOCUMENT NUMBER: 131:347873
TITLE: Insecticide compositions containing (tetrahydro-3-furanyl)methylamines and cyphenothrin or empenthrin
INVENTOR(S): Yamada, Eiichi; Kiritani, Yukio; Kawahara, Nobuyuki; Nakamura, Masahiko
PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11322511	A2	19991124	JP 1998-123581	19980506

PRIORITY APPLN. INFO.: JP 1998-123581 19980506
OTHER SOURCE(S): MARPAT 131:347873
GI



I

AB The compns., which showed high lethal effect, contain (tetrahydro-3-furanyl)methylamines I (X1-X7 = H, C1-4 alkyl; R1 = H, C1-5 alkyl, C3 alkenyl, benzyl, alkoxyalkyl, alkyloxycarbonyl, etc.; R2 = H, NH2, Me, C1-5 alkylamino, 1-pyrrolidinyl, etc.; Z = NNO2, CHNO2, NCN) and .gtoreq.1 compds. chosen from (RS)-.alpha.-cyano-3-phenoxybenzyl (1R)-cis,trans-chrysanthemate (II) and (E)-(RS)-1-ethynyl-2-methylpent-2-enyl (1R)-cis,trans-chrysanthemate. A 3:7 mixt. of I (X1-X7 = R1 = H, R2 = NHMe, Z = NNO2) and II showed lethal effect on **housefly** with LC50 of 18.9 ppm, vs. 135.3 or 35.6 ppm, for I or II alone, resp.

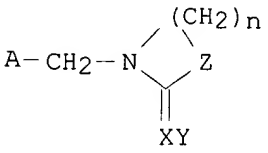
IT **250346-96-4 250346-97-5**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(insecticides contg. (tetrahydrofuranyl)methylamines and cyphenothrin or empenthrin)

L26 ANSWER 10 OF 19 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:678274 HCAPLUS
DOCUMENT NUMBER: 131:296524
TITLE: Compositions containing neonicotinoids and prallethrin

for synergistic control of arthropods
INVENTOR(S): Fujimoto, Izumi
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11292723	A2	19991026	JP 1998-97565	19980409
TW 478925	B	20020311	TW 1999-88103913	19990315
AU 9921356	A1	19991028	AU 1999-21356	19990323
AU 739438	B2	20011011		
US 6255340	B1	20010703	US 1999-287121	19990407
US 6284782	B1	20010904	US 2000-637697	20000815
US 6391327	B1	20020521	US 2000-637702	20000815

PRIORITY APPLN. INFO.: JP 1998-97565 A 19980409
US 1999-287121 A3 19990407
OTHER SOURCE(S): MARPAT 131:296524
GI



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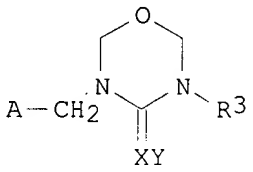

II

AB The compns. contain neonicotinoids A(CH2)mNR1C(:XY)R2, I, or II [A = 6-chloro-3-pyridinyl, 2-chloro-5-thiazolyl, tetrahydrofuran-2-yl, tetrahydrofuran-3-yl, 5-methyltetrahydrofuran-3-yl, 3-pyridinyl, 6-bromo-3-pyridinyl, 3-cyanophenyl, 2-methyl-5-thiazolyl, 2-phenyl-5-thiazolyl, 2-bromo-5-thiazolyl; R1 = H, Me, Et, CHO, OAc; R2 = Me, NH2, methylamino, N,N-dimethylamino, ethylamino, N,N-diethylamino, N-methyl-N-ethylamino, 1-pyrrolidinyl, (6-chloro-3-pyridinyl)methylamino, N-methyl-N-(6-chloro-3-pyridinyl)methylamino; R3 = Me, Et, Pr, propenyl, propynyl; X = N, CH; Y = cyano, NO2, COCF3; Z = NH, S; D = O, NMe; m = 0, 1; n = 2, 3] and prallethrin (III) as active ingredients. **Houseflies** were 100% controlled by concomitant application of III and (E)-N1-[(6-chloro-3-pyridyl)methyl]-N2-cyano-N1-methylacetamidine at 5 and 10 .mu.g/**housefly**.

IT **247146-90-3 247146-91-4 247158-92-5**
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(synergistic insecticides and acaricides contg. neonicotinoids and prallethrin)

L26 ANSWER 11 OF 19 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:328914 HCAPLUS
DOCUMENT NUMBER: 130:334135
TITLE: Ligands of the nicotinic acetylcholine receptor as insecticides
AUTHOR(S): Nauen, Ralf; Ebbinghaus, Ulrich; Tietjen, Klaus
CORPORATE SOURCE: Agrochemicals Division, Research, Bayer AG,

Leverkusen, D-51368, Germany
SOURCE: Pesticide Science (1999), 55(5), 608-610
CODEN: PSSCBG; ISSN: 0031-613X
PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Insect nicotinic acetyl receptors (nAChR) are targets of growing importance and, since the early 1990s, the no. of such highly effective insecticides as imidacloprid and spinosyn has grown. Several natural compds., e.g. dihydro-.beta.-erythroidine, Me caconitine and paraherquamide, showing high affinity to the same receptor, were considerably less active as insecticides, most likely because of their antagonistic action. Our observations on aphids after ingestion of the antagonistic compd. dihydro-.beta.-erythroidine revealed antifeedant-like properties. As a consequence, the symptomol. of poisoning was totally different between agonists and antagonists of the nAChR. Electrophysiol. (whole-cell voltage clamp) measurements in isolated **housefly** neurons revealed that agonism seems to be a prerequisite for insecticidal activity. Furthermore, we were able to demonstrate the existence of two different subtypes of the nAChR in isolated locust neurons with different pharmacol. and ion-channel properties.

IT **138261-41-3**, Imidacloprid **150824-47-8**, Nitenpyram **160430-64-8**, ACETAMIPRID
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(nicotinic receptor agonist and antagonist activity as related to insecticidal activity)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 12 OF 19 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:131573 HCAPLUS
DOCUMENT NUMBER: 128:214399
TITLE: Efficacy of plant metabolites of imidacloprid against Myzus persicae and Aphis gossypii (Homoptera: Aphididae)
AUTHOR(S): Nauen, Ralf; Tietjen, Klaus; Wagner, Klaus; Elbert, Alfred
CORPORATE SOURCE: Agrochem. Div., Res. Insecticides, Inst. Insect Control, Bayer AG, Leverkusen, D-51368, Germany
SOURCE: Pesticide Science (1998), 52(1), 53-57
CODEN: PSSCBG; ISSN: 0031-613X
PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The metab. of imidacloprid is strongly influenced by the method of application. While in foliar application most of the residues on the leaf surface display unchanged parent compd., most of the imidacloprid administered to plants by soil application or seed treatment is metabolized more or less completely, depending on plant species and time. The present study revealed that certain metabolites of imidacloprid, which have been described in crop plants, are highly active against aphid pests in different types of bioassays. Some of these metabolites showed a high oral activity against the green peach aphid (Myzus persicae), and the cotton aphid (Aphis gossypii). The aphicidal potency of the metabolites investigated was weaker in aphid dip tests than in oral ingestion bioassays using artificial double membranes. The most active plant metabolite was the imidazoline deriv. of imidacloprid. The LC50 values of this metabolite for M. persicae and A. gossypii in oral ingestion bioassays were 0.0044 and 0.0068 mg L-1, resp. Most of he other reported metabolites showed much weaker activity. Compared to imidacloprid, the imidazoline deriv. showed superior affinity to **housefly** (

Musca domestica) head nicotinic acetylcholine receptors, while all other metabolites were less specific than imidacloprid. It seems possible that, after seed treatment or soil application, a few of the biol.-active metabolites arising are acting in concert with remaining levels of the parent compd. imidacloprid, thus providing good control and long-lasting residual activity against plant-sucking pests in certain crops.

IT **131206-85-4 138261-41-3**, Imidacloprid
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(efficacy of plant metabolites of imidacloprid against aphids)

L26 ANSWER 13 OF 19 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:773986 HCAPLUS
DOCUMENT NUMBER: 128:85429
TITLE: Structural factors contributing to insecticidal and selective actions of neonicotinoids
AUTHOR(S): Yamamoto, Izuru; Tamizawa, Motohiro; Saito, Takayuki; Miyamoto, Toru; Walcott, Elisabeth C.; Sumikawa, Katsumi
CORPORATE SOURCE: Department Agricultural Chemistry, Tokyo University Agriculture, Tokyo, Japan
SOURCE: Archives of Insect Biochemistry and Physiology (1998), 37(1), 24-32
CODEN: AIBPEA; ISSN: 0739-4462
PUBLISHER: Wiley-Liss, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Nicotinoids and neonicotinoids are characterized by the presence of the 3-pyridylmethylamine moiety in their structure. In the former, the amino nitrogen atom is ionized, while in the latter the corresponding nitrogen atom is not ionized but bears a partial pos. charge. Both types of insecticides interact with nicotinic acetylcholine receptor (nAChR) of insect origin. The poor interaction of neonicotinoids with vertebrate nAChR was shown by its poor binding affinity to the nAChR from Torpedo elec. organ and rat brain and poor activation with nAChR expressed in Xenopus oocytes. The full pos. charge was essential to interact with the vertebrate nAChR, while the 3-pyridylmethylamine moiety with a partial pos. charge was enough to interact with the insect nAChR. For penetration into the insect central nervous system, hydrophobicity seemed to play an important role, as indicated by the binding of the injected compds. to the **housefly** head nAChR. The ionization reduced hydrophobicity and limited the penetration of nicotinoids, resulting in less insecticidal activity. Among neonicotinoids, nitromethylene type compds., though far higher in binding affinity, were less hydrophobic than the corresponding nitroimine type, and the net results was better or inferior insecticidal activity. A chlorine atom at the 6 position of the 3-pyridyl group found in commercialized neonicotinoids contributes to increased binding affinity and more importantly hydrophobicity, thus increasing insecticidal activity. N-Me-imidacloprid was found to be a pro-pesticide of imidacloprid.

IT **100553-56-8**, PMNI **101336-63-4**, 6-Chloro-PMNI
101990-37-8, 6-Methyl-PMNI **105828-05-5**
105828-97-5 117906-15-7 138261-41-3,
Imidacloprid **150824-47-8**, Nitenpyram **160430-64-8**,
Acetamiprid
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(structural factors contributing to insecticidal and selective actions of neonicotinoids)

L26 ANSWER 14 OF 19 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:773969 HCAPLUS

DOCUMENT NUMBER: 128:85428
TITLE: Structure-activity relationships of acyclic nicotinoids and neonicotinoids for insect nicotinic acetylcholine receptor/ion channel complex
AUTHOR(S): Matsuo, Hanako; Tomizawa, Motohiro; Yamamoto, Izuru
CORPORATE SOURCE: Department Agricultural Chemistry, Tokyo University Agriculture, Setagaya, 156, Japan
SOURCE: Archives of Insect Biochemistry and Physiology (1998), 37(1), 17-23
CODEN: AIBPEA; ISSN: 0739-4462
PUBLISHER: Wiley-Liss, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The insect nicotinic acetylcholine (ACh) receptor (nAChR) is a target site for the neonicotinoid insecticides such as imidacloprid and its acyclic deriv. acetamiprid. The structure-activity relationships of acetamiprid homologues and 3-pyridylmethylamines (known as the essential structural requirement of nicotinoid) are compared in terms of the affinity to the [3H].alpha.-bungarotoxin (.alpha.-BGT) site (designated as ACh site) and the [3H]phencyclidine (PCP) site [designated as noncompetitive blocker (NCB) site] of the insect nAChR from the honeybee heads. Increasing the chain length of alkyl substituents (from Me to n-butyl) on an amino nitrogen atom of acetamiprid homolog and 3-pyridylmethylamine reduces the potency as inhibitors of [3H].alpha.-BGT binding, whereas it confers the enhanced potency as inhibitors of [3H]PCP binding in the insect nAChR. Scatchard anal. reveals that homologues of acetamiprid and 3-pyridylmethylamine having Bu substituents interact with the high-affinity binding site for [3H]PCP, which is considered to be the NCB site located in the ion channel of the insect nAChR. The interaction of acetamiprid homologues with the ACh or NCB site of nAChR is selective for insects, while that of the 3-pyridylmethylamines is effective for both insect and Torpedo [Tomizawa et al., J Pesticide Sci 21:412-418 (1996)]. The explorations in further structural modification of neonicotinoid compds. may facilitate development of new insecticides or probes for the ion channel of insect nAChR.

IT **135410-40-1 160430-64-8**, Acetamiprid
160430-64-8D, Acetamiprid, derivs. **201006-21-5**
201006-22-6
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(structure-activity relationships of acyclic nicotinoids and neonicotinoids for insect nicotinic acetylcholine receptor/ion channel complex)

L26 ANSWER 15 OF 19 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:541916 HCAPLUS
DOCUMENT NUMBER: 127:201426
TITLE: Pest control agent and device for exterminating flying insects
INVENTOR(S): Takeda, Hiroyuki; Nakao, Kazuki; Minagawa, Fumiyasu
PATENT ASSIGNEE(S): Yuko Yakuhin Kogyo K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09202703	A2	19970805	JP 1996-309131	19961120

PRIORITY APPLN. INFO.: JP 1995-301616 19951120

AB A molded body consisting of water-absorbent porous or polymeric material

is impregnated with a liq. pest control agent contg. an insect attractant and an insecticidal component to obtain a pest control agent that is esp. suitable for exterminating flying insects indoors. A pest control device that can be suspended from the ceiling or from a beam consists of a basketlike container filled with material impregnated with the pest control agent; the device may also be equipped with a continuous feeder connected through a narrow tube to an auxiliary tank from which the pest control agent drips. Thus, a pest control agent was manufd. by batch mixing S-[(6-chloro-2-oxooxazolo[4,5-b]pyridin-3-yl)methyl] O,O-di-Me phosphorothioate 0.5, polyethylene glycol (PEG 200) 49.5, sugar 12.5, skim milk powder 12.5, and purified water 25.0% by wt. Ten parts by wt. Aqua Calk was impregnated with 50 parts of the liq. agent obtained and put in a pest control device. The agent completely controlled **houseflies** even after 4 wk.

IT **138261-41-3**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(water-absorbent material impregnated with insect attractant and insecticide for controlling flying insects)

L26 ANSWER 16 OF 19 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1996:601177 HCAPLUS

DOCUMENT NUMBER: 125:296387

TITLE: Novel neonicotinoid-agarose affinity column for Drosophila and **Musca** nicotinic acetylcholine receptors

AUTHOR(S): Tomizawa, Motohiro; Latli, Bachir; Casida, John E.

CORPORATE SOURCE: Environmental Chemistry and Toxicology Lab., Univ. of California, Berkeley, CA, USA

SOURCE: Journal of Neurochemistry (1996), 67(4), 1669-1676
CODEN: JONRA9; ISSN: 0022-3042

PUBLISHER: Lippincott-Raven

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Neonicotinoids such as the insecticide imidacloprid (IMI) act as agonists at the insect nicotinic acetylocholine receptor (nAchR). Head membranes of Drosophila melanogaster and **Musca domestica** have a single high-affinity binding site for [3H] IMI with Kd values of 1-2 nM and Bmax values of 560-850 fmol/mg of protein. Locusta and Periplaneta nAChRs isolated with an .alpha.-bungarotoxin (.alpha.-BGT)-agarose affinity column are known to be .alpha.-subunit homooligomers. This study uses 1-[N-(6-chloro-3-pyridylmethyl)-N-ethyl]amino-1-amino-2-nitroethene (which inhibits [3H]IMI binding to Drosophila and **Musca** head membranes at 2-3 nM) to develop a neonicotinoid-agarose affinity column. The procedure-introduction of Triton-solubilized Drosophila or **Musca** head membranes into this neonicotinoid-based column, elution with IMI, and anal. by lithium dodecyl sulfate-PAGE-gives only three proteins (69, 66, and 61 kDa) tentatively assigned as putative subunits of the nAChR; the same three proteins are obtained with **musca** using the .alpha.-BGT-agarose affinity column. Photoaffinity labeling of the Drosophila and **Musca** putative subunits from the neonicotinoid column with 125I-.alpha.-BGT-4-azidosalicylic acid gives a labeled deriv. of 66-69 kDa. The yield is 2-5 .mu.g of receptor protein from 1 g of Drosophila or **Musca** heads. Neonicotinoid affinity chromatog. to isolate native drosophila and **musca** receptors will facilitate studies on the structure and function of insect nAChRs.

IT **120770-86-7**

RL: NUU (Other use, unclassified); USES (Uses)

(novel neonicotinoid-agarose affinity column for Drosophila and **Musca** nicotinic acetylcholine receptors)

L26 ANSWER 17 OF 19 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1995:779743 HCAPLUS
DOCUMENT NUMBER: 123:191172
TITLE: Imidacloprid binding site in **Musca** nicotinic acetylcholine receptor: interactions with physostigmine and a variety of nicotinic agonists with chloropyridyl and chlorothiazolyl substituents
AUTHOR(S): Liu, Ming-Yie; Latli, Bachir; Casida, John E.
CORPORATE SOURCE: Environmental Chemistry and Toxicology Laboratory, Univ. California, Berkeley, CA, 94720-3112, USA
SOURCE: Pesticide Biochemistry and Physiology (1995), 52(3), 170-81
CODEN: PCBPBS; ISSN: 0048-3575
PUBLISHER: Academic
DOCUMENT TYPE: Journal
LANGUAGE: English
AB [3H]Imidacloprid ([3H]IMI) is known to bind with high affinity to the nicotinic acetylcholine receptor (nAChR) agonist site in **Musca domestica** L. (**Musca**) head membranes. Physostigmine (PHY) acts in vertebrates at the nAChR ion-channel complex as an activator at low concns. and an open channel blocker at high levels. PHY inhibits [3H]IMI binding in **Musca** with an IC50 of 8 .mu.M. The binding site for PHY is assocd. with the nAChR since the potency of PHY is decreased 2.3- to 13-fold by (-)-nicotine but little if any by carbachol, each at 1 .mu.M. Acetylcholine (ACh) serves as both a competitive inhibitor of [3H]IMI binding, reducing the rates of assocn. and dissocn. in a biphasic manner, and a substrate for acetylcholinesterase (AChE), which is in turn inhibited by PHY. PHY at 0.1 and 1 .mu.M is a competitive inhibitor of [3H]IMI binding, whereas at 100 .mu.M it is noncompetitive and increases the Kd by 25-fold and Bmax by 2.2-fold. PHY at 0.1 .mu.M increases the apparent potency of ACh as an inhibitor of [3H]IMI binding, due to AChE inhibition, whereas at 10 and 100 .mu.M it does not alter the IC50s of ACh. Thus, an apparent allosteric interaction occurs between the [3H]IMI and PHY binding sites. The high structural specificity of PHY in this region is established by finding that eseroline is also active (IC50 = 40 .mu.M) and that over 140 methyl- and dimethylcarbamate and organophosphorus insecticides and related compds. are not inhibitory at 10 .mu.M. [3H]IMI binding is also inhibited by the chloronicotinyl analgetic agent epibatidine (IC50 = 350 nM) and by six cyanoimine insecticides including chloronicotinyl and chlorothiazolyl analogs. The inhibitory potency of acetamiprid (IC50 = 3.2 nM) and other cyanoimines at the nAChR agonist site correlates well (r = 0.98, n = 6) with their intrinsic toxicity to **Musca** (i.e., their knockdown or lethal effects on injection and with a synergist to minimize oxidative detoxification). [3H]IMI is therefore a suitable radioligand for investigating the interaction of PHY and a variety of nicotinic agonists with chloropyridyl and chlorothiazolyl substituents at the insect nAChR.
IT **138261-41-3**, Imidacloprid
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(imidacloprid binding site in **Musca** nicotinic acetylcholine receptor and interactions with physostigmine and nicotinic agonists with chloropyridyl and chlorothiazolyl substituents)
IT **160430-64-8P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(prepn. and interactions with imidacloprid binding site in **Musca** nicotinic acetylcholine receptor and with physostigmine and nicotinic agonists with chloropyridyl and chlorothiazolyl substituents)
IT **111988-47-7P 129478-37-1P 135410-92-3P 167776-63-8P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological

study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(prepn. and interactions with imidacloprid binding site in **Musca** nicotinic acetylcholine receptor and with with physostigmine and nicotinic agonists with chloropyridyl and chlorothiazolyl substituents)

L26 ANSWER 18 OF 19 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:406807 HCAPLUS
DOCUMENT NUMBER: 122:207670
TITLE: Pharmacological characteristics of insect nicotinic acetylcholine receptor with its ion channel and the comparison of the effect of nicotinoids and neonicotinoids
AUTHOR(S): Tomizawa, Motohiro; Otsuka, Hiroko; Miyamoto, Toru; Eldefrawi, Mohyee E.; Yamamoto, Izuru
CORPORATE SOURCE: Dep. Agric. Chem., Tokyo Univ. Agric., Tokyo, 156, Japan
SOURCE: Nippon Noyaku Gakkaishi (1995), 20(1), 57-64
CODEN: NNGADV; ISSN: 0385-1559
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Using radioreceptor assay with [3H].alpha.-bungarotoxin (.alpha.-BGT) and [3H]phencyclidine (PCP) as probes for the nicotinic acetylcholine receptor (nAChR) in membranes obtained from honeybee heads, the effects of various nAChR ligands, nicotinoids, and neonicotinoids were studied. The data indicated differences in pharmacol. characteristics between Torpedo elec. organ and honeybee brain nAChRs. [3H].alpha.-BGT binds to the acetylcholine (ACh) recognition site of the nAChRs of vertebrate skeletal muscle, Torpedo elec. organ and honeybee brain. In vertebrates, [3H]PCP binds to an allosteric site on the receptor's ion channel and its binding is stimulated by receptor activation with agonists. The tested vertebrate cholinergic agonists inhibited [3H].alpha.-BGT binding, but did not activate [3H]PCP binding to the honeybee nAChR. Satn. isotherms of the binding of [3H].alpha.-BGT with or without PCP indicated that PCP interacted with the ACh recognition site on the nAChR. Nicotine inhibited not only [3H].alpha.-BGT binding but also [3H]PCP binding. Detailed study of [3H]PCP binding indicated that [3H]PCP bound to the honeybee brain membranes both at high and low affinity sites. The former corresponded to the vertebrate allosteric site on the nAChR and the latter to the ACh recognition site. Nicotine, anabasine, and nitenpyram bound to both sites, while imidacloprid, 6-Cl-PMNI and acetamiprid bound selectively to the ACh recognition site. In **houseflies**, nicotine and imidacloprid produced excitation followed by paralysis, while PCP was anesthetic, even though PCP was as insecticidal as nicotine.
IT **101336-63-4 138261-41-3**, Imidacloprid
150824-47-8, Nitenpyram **160430-64-8**, Acetamiprid
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(pharmacol. characteristics of insect nicotinic receptor with its ion channel)

L26 ANSWER 19 OF 19 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1993:443289 HCAPLUS
DOCUMENT NUMBER: 119:43289
TITLE: Binding of nicotinoids and the related compounds to the insect nicotinic acetylcholine receptor
AUTHOR(S): Tomizawa, Motohiro; Yamamoto, Izuru
CORPORATE SOURCE: Lab. Pestic. Bio-Org. Chem., Tokyo Univ. Agric., Tokyo, 156, Japan
SOURCE: Journal of Pesticide Science (International Edition) (1992), 17(4), 231-6
CODEN: JPESEC; ISSN: 0916-9962

DOCUMENT TYPE: Journal
LANGUAGE: English
AB In a radio receptor assay on the binding at the [3H].alpha.-bungarotoxin binding site to the nicotinic acetylcholine receptor (nAChR) obtained from **housefly** and honeybee head membranes, nicotine, nornicotine, anabasine and dihydronicotyrine, all with highly basic nitrogen, had a strong binding affinity, whereas myosmine, nicotyrine and cotinine, with low basic nitrogen, did not. Structure-binding relationships of the above nicotinoids and pyridylmethylamines mostly coincided with the previously studied relationships to the insecticidal activity, the effect on nerve activity and the inhibition of acetylcholinesterase (AChE). Both enantiomers of nicotine had an affinity for nAChR, although the affinity was higher in the l-form than in the d-form. Imidacloprid interacted at the same site on the nAChR, but oxadiazolone, a potent AChE inhibitor, had no affinity.
IT **138261-41-3**, Imidacloprid
RL: PROC (Process)
(binding of, to insect nicotinic acetylcholine receptors)

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=> select hit rn l26 1-19
E1 THROUGH E68 ASSIGNED

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=> d his l27

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SELECT HIT RN L26 1-19

FILE 'REGISTRY' ENTERED AT 15:23:37 ON 13 MAR 2003
L27 49 S E1-E68 NOT L15

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L27 ANSWER 1 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **343581-24-8** REGISTRY
CN Pyridine, 2-chloro-5-[[2-(nitromethylene)-3-phenyl-1-imidazolidinyl]methyl]- (9CI) (CA INDEX NAME)
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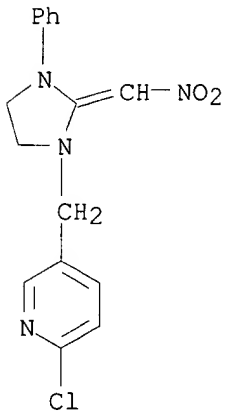
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER



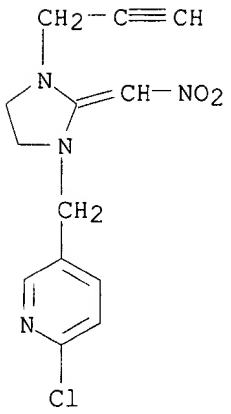
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:284510

REFERENCE 2: 135:30264

L27 ANSWER 2 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **343581-23-7** REGISTRY
CN Pyridine, 2-chloro-5-[[2-(nitromethylene)-3-(2-propynyl)-1-imidazolidinyl]methyl]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C13 H13 Cl N4 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER



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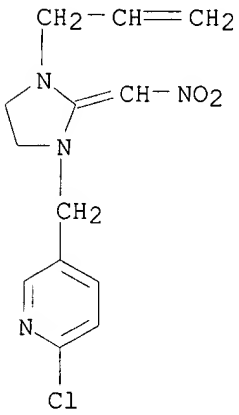
2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:284510

REFERENCE 2: 135:30264

L27 ANSWER 3 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **343581-22-6** REGISTRY
CN Pyridine, 2-chloro-5-[[2-(nitromethylene)-3-(2-propenyl)-1-imidazolidinyl]methyl]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C13 H15 Cl N4 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER



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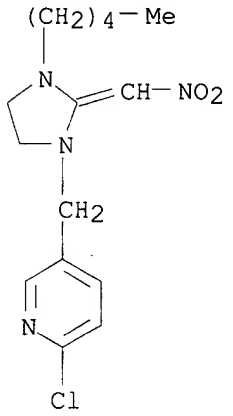
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:284510

REFERENCE 2: 135:30264

L27 ANSWER 4 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **343581-21-5** REGISTRY
CN Pyridine, 2-chloro-5-[[2-(nitromethylene)-3-pentyl-1-imidazolidinyl]methyl]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C15 H21 Cl N4 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER



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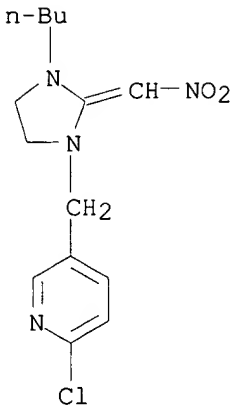
2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:284510

REFERENCE 2: 135:30264

L27 ANSWER 5 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **343581-19-1** REGISTRY
CN Pyridine, 5-[[3-butyl-2-(nitromethylene)-1-imidazolidinyl]methyl]-2-chloro- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C14 H19 Cl N4 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER



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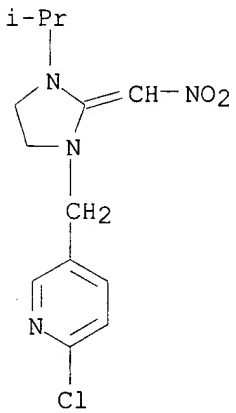
2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:284510

REFERENCE 2: 135:30264

L27 ANSWER 6 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **343581-18-0** REGISTRY
CN Pyridine, 2-chloro-5-[[3-(1-methylethyl)-2-(nitromethylene)-1-imidazolidinyl]methyl]- (9CI) (CA INDEX NAME)
MF C13 H17 Cl N4 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER



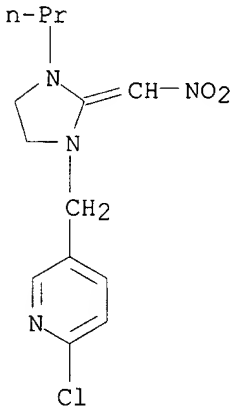
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:284510

REFERENCE 2: 135:30264

L27 ANSWER 7 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **343581-17-9** REGISTRY
CN Pyridine, 2-chloro-5-[[2-(nitromethylene)-3-propyl-1-imidazolidinyl]methyl]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C13 H17 Cl N4 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER



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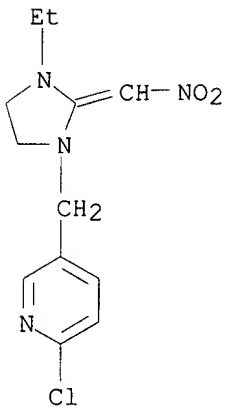
2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:284510

REFERENCE 2: 135:30264

L27 ANSWER 8 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **343581-16-8** REGISTRY
CN Pyridine, 2-chloro-5-[[3-ethyl-2-(nitromethylene)-1-imidazolidinyl]methyl]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C12 H15 Cl N4 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER



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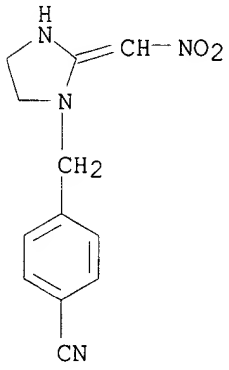
2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:284510

REFERENCE 2: 135:30264

L27 ANSWER 9 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **303185-43-5** REGISTRY
CN Benzonitrile, 4-[[2-(nitromethylene)-1-imidazolidinyl]methyl]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C12 H12 N4 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

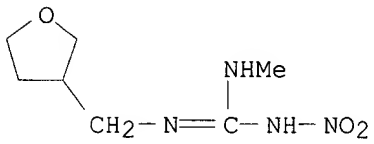
REFERENCE 1: 133:330893

L27 ANSWER 10 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **250346-97-5** REGISTRY

CN Cyclopropanecarboxylic acid, 2,2-dimethyl-3-(2-methyl-1-propenyl)-, 1-ethynyl-2-methyl-2-pentenyl ester, mixt. with N-methyl-N'-nitro-N''-[(tetrahydro-3-furanyl)methyl]guanidine (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Guanidine, N-methyl-N'-nitro-N''-[(tetrahydro-3-furanyl)methyl]-, mixt. contg. (9CI)
MF C18 H26 O2 . C7 H14 N4 O3
CI MXS
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

CM 1

CRN 165252-70-0
CMF C7 H14 N4 O3



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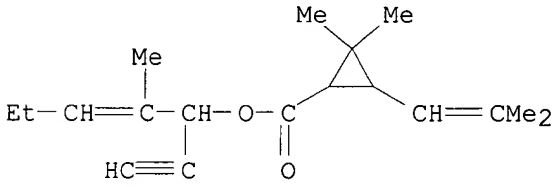
CRN 54406-48-3
CMF C18 H26 O2



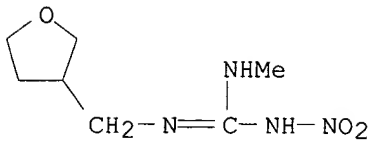
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 131:347873

L27 ANSWER 11 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **250346-96-4** REGISTRY
CN Cyclopropanecarboxylic acid, 2,2-dimethyl-3-(2-methyl-1-propenyl)-, cyano(3-phenoxyphenyl)methyl ester, mixt. with N-methyl-N'-nitro-N''-[(tetrahydro-3-furanyl)methyl]guanidine (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Guanidine, N-methyl-N'-nitro-N''-[(tetrahydro-3-furanyl)methyl]-, mixt. contg. (9CI)
MF C24 H25 N O3 . C7 H14 N4 O3
CI MXS
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

CM 1

CRN 165252-70-0
CMF C7 H14 N4 O3



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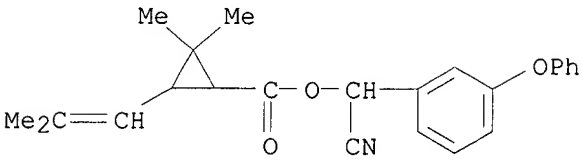
CRN 39515-40-7
CMF C24 H25 N O3



2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

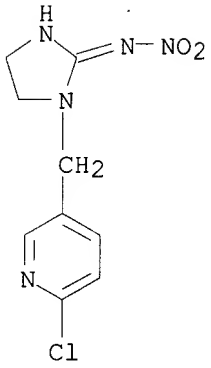
REFERENCE 1: 134:82194

REFERENCE 2: 131:347873

L27 ANSWER 12 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **247158-92-5** REGISTRY
CN Cyclopropanecarboxylic acid, 2,2-dimethyl-3-(2-methyl-1-propenyl)-, 2-methyl-4-oxo-3-(2-propynyl)-2-cyclopenten-1-yl ester, mixt. with 1-[(6-chloro-3-pyridinyl)methyl]-4,5-dihydro-N-nitro-1H-imidazol-2-amine (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1H-Imidazol-2-amine, 1-[(6-chloro-3-pyridinyl)methyl]-4,5-dihydro-N-nitro-, mixt. contg. (9CI)
MF C19 H24 O3 . C9 H10 Cl N5 O2
CI MXS
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

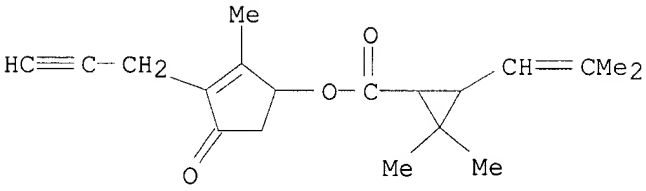
CM 1

CRN 138261-41-3
CMF C9 H10 Cl N5 O2



CM 2

CRN 23031-36-9
CMF C19 H24 O3



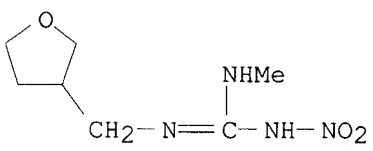
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 131:296524

L27 ANSWER 13 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **247146-91-4** REGISTRY
CN Cyclopropanecarboxylic acid, 2,2-dimethyl-3-(2-methyl-1-propenyl)-, 2-methyl-4-oxo-3-(2-propynyl)-2-cyclopenten-1-yl ester, mixt. with N-methyl-N'-nitro-N''-[(tetrahydro-3-furanyl)methyl]guanidine (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Guanidine, N-methyl-N'-nitro-N''-[(tetrahydro-3-furanyl)methyl]-, mixt. contg. (9CI)
MF C19 H24 O3 . C7 H14 N4 O3
CI MXS
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

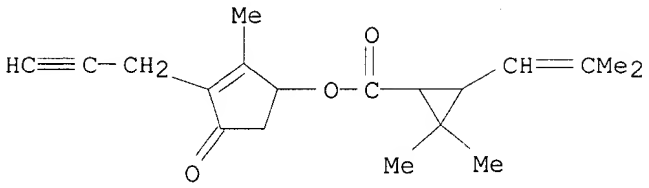
CM 1

CRN 165252-70-0
CMF C7 H14 N4 O3



CM 2

CRN 23031-36-9
CMF C19 H24 O3



2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 131:347877

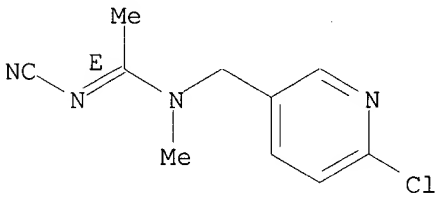
REFERENCE 2: 131:296524

L27 ANSWER 14 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **247146-90-3** REGISTRY
CN Cyclopropanecarboxylic acid, 2,2-dimethyl-3-(2-methyl-1-propenyl)-, 2-methyl-4-oxo-3-(2-propynyl)-2-cyclopenten-1-yl ester, mixt. with (1E)-N-[(6-chloro-3-pyridinyl)methyl]-N'-cyano-N-methylethanimidamide (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Ethanimidamide, N-[(6-chloro-3-pyridinyl)methyl]-N'-cyano-N-methyl-, (1E)-, mixt. contg. (9CI)
FS STEREOSEARCH
MF C19 H24 O3 . C10 H11 Cl N4
CI MXS
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

CM 1

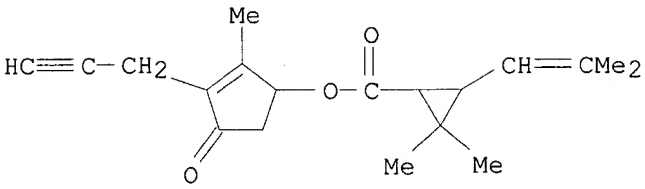
CRN 160430-64-8
CMF C10 H11 Cl N4

Double bond geometry as shown.



CM 2

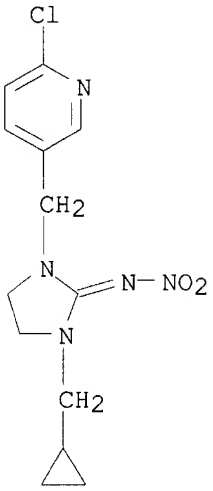
CRN 23031-36-9
CMF C19 H24 O3



1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 131:296524

L27 ANSWER 15 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **221347-65-5** REGISTRY
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-3-(cyclopropylmethyl)-N-nitro- (9CI) (CA INDEX NAME)
MF C13 H16 Cl N5 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER



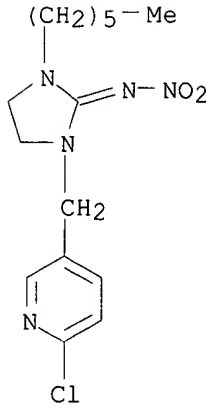
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:284510

REFERENCE 2: 130:233620

L27 ANSWER 16 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **211229-67-3** REGISTRY
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-3-hexyl-N-nitro-(9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C15 H22 Cl N5 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

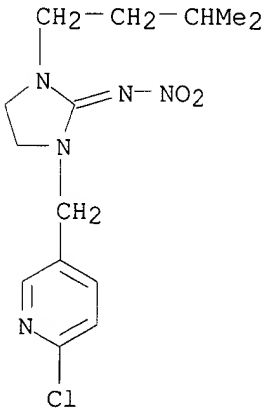
3 REFERENCES IN FILE CA (1962 TO DATE)
3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:284510

REFERENCE 2: 130:233620

REFERENCE 3: 129:157935

L27 ANSWER 17 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **211229-66-2** REGISTRY
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-3-(3-methylbutyl)-N-nitro- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C14 H20 Cl N5 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

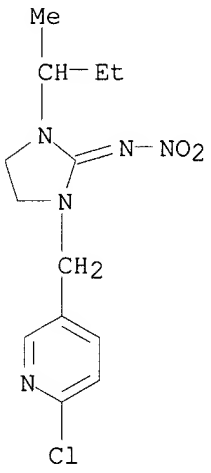
3 REFERENCES IN FILE CA (1962 TO DATE)
3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:284510

REFERENCE 2: 130:233620

REFERENCE 3: 129:157935

L27 ANSWER 18 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **211229-65-1** REGISTRY
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-3-(1-methylpropyl)-N-nitro- (9CI) (CA INDEX NAME)
MF C13 H18 Cl N5 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

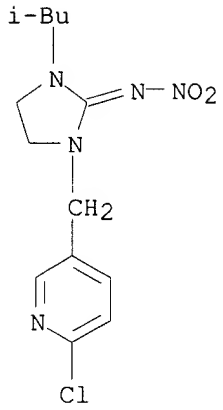
3 REFERENCES IN FILE CA (1962 TO DATE)
3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:284510

REFERENCE 2: 130:233620

REFERENCE 3: 129:157935

L27 ANSWER 19 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **211229-64-0** REGISTRY
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-3-(2-methylpropyl)-N-nitro- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C13 H18 Cl N5 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

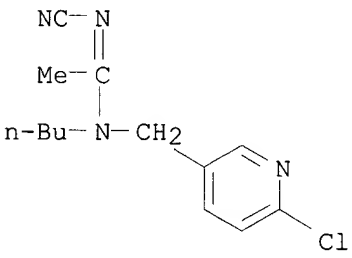
3 REFERENCES IN FILE CA (1962 TO DATE)
3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:284510

REFERENCE 2: 130:233620

REFERENCE 3: 129:157935

L27 ANSWER 20 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **201006-22-6** REGISTRY
CN Ethanimidamide, N-butyl-N-[(6-chloro-3-pyridinyl)methyl]-N'-cyano- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C13 H17 Cl N4
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER



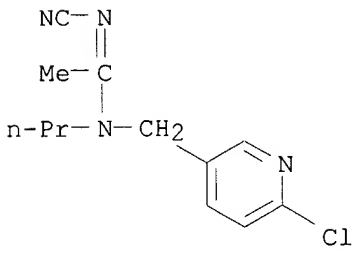
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 128:85428

L27 ANSWER 21 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **201006-21-5** REGISTRY
CN Ethanimidamide, N-[(6-chloro-3-pyridinyl)methyl]-N'-cyano-N-propyl- (9CI) (CA INDEX NAME)

FS 3D CONCORD
MF C12 H15 Cl N4
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

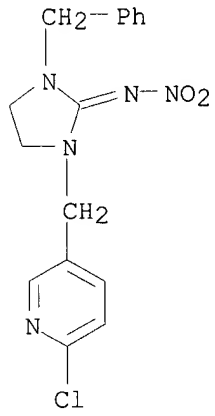


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 128:85428

L27 ANSWER 22 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **181066-34-2** REGISTRY
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-3-(phenylmethyl)- (9CI) (CA INDEX NAME)
MF C16 H16 Cl N5 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1962 TO DATE)
4 REFERENCES IN FILE CAPLUS (1962 TO DATE)

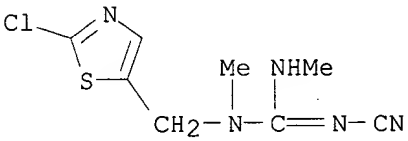
REFERENCE 1: 135:284510

REFERENCE 2: 130:233620

REFERENCE 3: 129:157935

REFERENCE 4: 125:188277

L27 ANSWER 23 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **167776-63-8** REGISTRY
CN Guanidine, N-[(2-chloro-5-thiazolyl)methyl]-N'-cyano-N,N''-dimethyl- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C8 H10 Cl N5 S
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

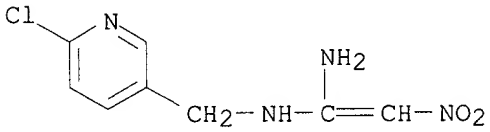


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 123:191172

L27 ANSWER 24 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **153909-65-0** REGISTRY
CN 1,1-Ethenediamine, N-[(6-chloro-3-pyridinyl)methyl]-2-nitro- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C8 H9 Cl N4 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1962 TO DATE)
4 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 133:85574

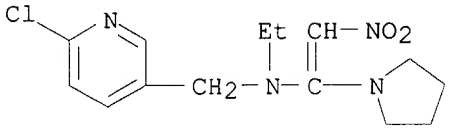
REFERENCE 2: 132:344438

REFERENCE 3: 129:4587

REFERENCE 4: 120:270122

L27 ANSWER 25 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **149019-67-0** REGISTRY
CN 3-Pyridinemethanamine, 6-chloro-N-ethyl-N-[2-nitro-1-(1-pyrrolidinyl)ethenyl]- (9CI) (CA INDEX NAME)
MF C14 H19 Cl N4 O2

SR CA
LC STN Files: CA, CAPLUS, TOXCENTER



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1962 TO DATE)
4 REFERENCES IN FILE CAPLUS (1962 TO DATE)

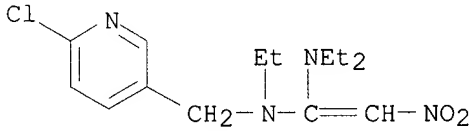
REFERENCE 1: 133:85574

REFERENCE 2: 132:344438

REFERENCE 3: 121:198499

REFERENCE 4: 119:139023

L27 ANSWER 26 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **149019-66-9** REGISTRY
CN 1,1-Ethenediamine, N-[(6-chloro-3-pyridinyl)methyl]-N,N',N'-triethyl-2-nitro- (9CI) (CA INDEX NAME)
MF C14 H21 Cl N4 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1962 TO DATE)
4 REFERENCES IN FILE CAPLUS (1962 TO DATE)

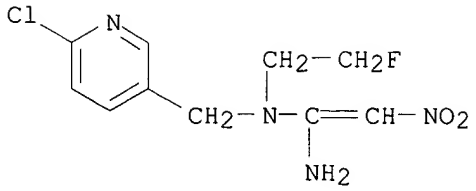
REFERENCE 1: 133:85574

REFERENCE 2: 132:344438

REFERENCE 3: 121:198499

REFERENCE 4: 119:139023

L27 ANSWER 27 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **149019-57-8** REGISTRY
CN 1,1-Ethenediamine, N-[(6-chloro-3-pyridinyl)methyl]-N-(2-fluoroethyl)-2-nitro- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C10 H12 Cl F N4 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1962 TO DATE)
4 REFERENCES IN FILE CAPLUS (1962 TO DATE)

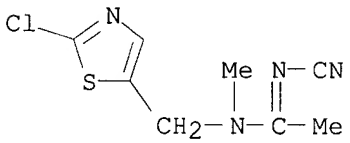
REFERENCE 1: 133:85574

REFERENCE 2: 132:344438

REFERENCE 3: 121:198499

REFERENCE 4: 119:139023

L27 ANSWER 28 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **135410-92-3** REGISTRY
CN Ethanimidamide, N-[(2-chloro-5-thiazolyl)methyl]-N'-cyano-N-methyl- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C8 H9 Cl N4 S
CI COM
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

9 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
9 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 133:306673

REFERENCE 2: 131:318948

REFERENCE 3: 131:181124

REFERENCE 4: 131:166526

REFERENCE 5: 123:191172

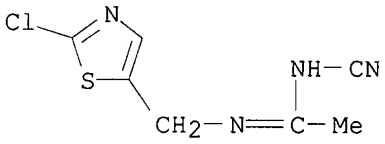
REFERENCE 6: 120:127812

REFERENCE 7: 119:133485

REFERENCE 8: 118:228262

REFERENCE 9: 115:92085

L27 ANSWER 29 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **135410-91-2** REGISTRY
CN Ethanimidamide, N-[(2-chloro-5-thiazolyl)methyl]-N'-cyano- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C7 H7 Cl N4 S
SR CA
LC STN Files: CA, CAPLUS, USPATFULL



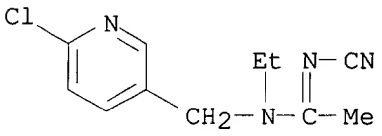
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 133:306673

REFERENCE 2: 115:92085

L27 ANSWER 30 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **135410-40-1** REGISTRY
CN Ethanimidamide, N-[(6-chloro-3-pyridinyl)methyl]-N'-cyano-N-ethyl- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C11 H13 Cl N4
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1962 TO DATE)
5 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 131:318948

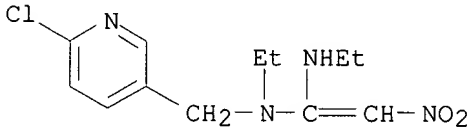
REFERENCE 2: 128:85428

REFERENCE 3: 120:127812

REFERENCE 4: 119:271020

REFERENCE 5: 115:92085

L27 ANSWER 31 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **135159-28-3** REGISTRY
CN 1,1-Ethenediamine, N-[(6-chloro-3-pyridinyl)methyl]-N,N'-diethyl-2-nitro-(9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C12 H17 Cl N4 O2
CI COM
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
7 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 133:85574

REFERENCE 2: 132:344438

REFERENCE 3: 121:198499

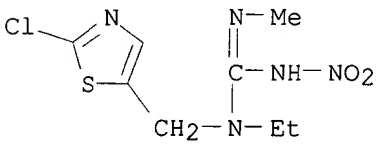
REFERENCE 4: 119:139023

REFERENCE 5: 115:201145

REFERENCE 6: 115:87524

REFERENCE 7: 115:66815

L27 ANSWER 32 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **131748-66-8** REGISTRY
CN Guanidine, N-[(2-chloro-5-thiazolyl)methyl]-N-ethyl-N'-methyl-N''-nitro-(9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C8 H12 Cl N5 O2 S
SR CA
LC STN Files: CA, CAPLUS, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

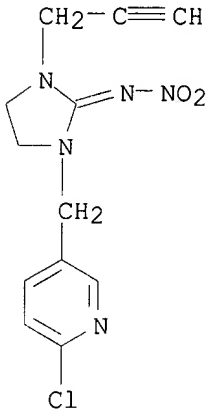
3 REFERENCES IN FILE CA (1962 TO DATE)
3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 133:306673

REFERENCE 2: 116:21040

REFERENCE 3: 114:61934

L27 ANSWER 33 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **131607-72-2** REGISTRY
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-3-(2-propynyl)- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C12 H12 Cl N5 O2
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1962 TO DATE)
5 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:284510

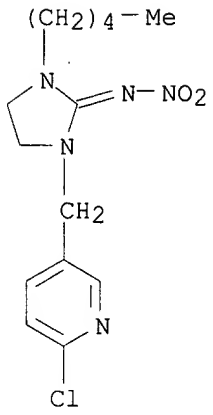
REFERENCE 2: 130:233620

REFERENCE 3: 129:157935

REFERENCE 4: 116:250454

REFERENCE 5: 114:62097

L27 ANSWER 34 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **131607-70-0** REGISTRY
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-3-pentyl- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C14 H20 Cl N5 O2
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1962 TO DATE)
5 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:284510

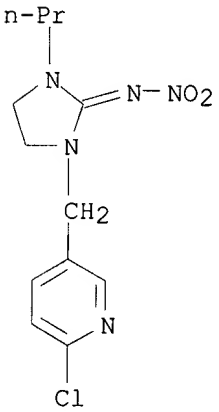
REFERENCE 2: 130:233620

REFERENCE 3: 129:157935

REFERENCE 4: 116:250454

REFERENCE 5: 114:62097

L27 ANSWER 35 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **131607-69-7** REGISTRY
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-3-propyl- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C12 H16 Cl N5 O2
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1962 TO DATE)
5 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:284510

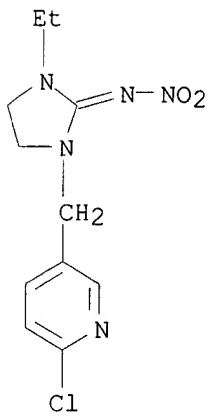
REFERENCE 2: 130:233620

REFERENCE 3: 129:157935

REFERENCE 4: 116:250454

REFERENCE 5: 114:62097

L27 ANSWER 36 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **131607-68-6** REGISTRY
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-3-ethyl-N-nitro- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C11 H14 Cl N5 O2
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1962 TO DATE)
5 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:284510

REFERENCE 2: 130:233620

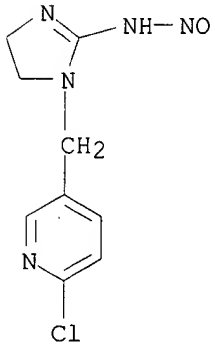
REFERENCE 3: 129:157935

REFERENCE 4: 116:250454

REFERENCE 5: 114:62097

L27 ANSWER 37 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **131206-85-4** REGISTRY
CN 1H-Imidazol-2-amine, 1-[(6-chloro-3-pyridinyl)methyl]-4,5-dihydro-N-nitroso- (9CI) (CA INDEX NAME)

FS 3D CONCORD
DR 330560-14-0
MF C9 H10 Cl N5 O
SR CA
LC STN Files: CA, CAPLUS, CASREACT, RTECS*, TOXCENTER
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7 REFERENCES IN FILE CA (1962 TO DATE)
7 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:290159

REFERENCE 2: 137:120896

REFERENCE 3: 134:237427

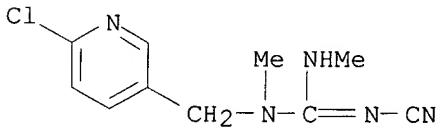
REFERENCE 4: 128:214404

REFERENCE 5: 128:214399

REFERENCE 6: 120:2819

REFERENCE 7: 114:19411

L27 ANSWER 38 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **129478-37-1** REGISTRY
CN Guanidine, N-[(6-chloro-3-pyridinyl)methyl]-N'-cyano-N,N''-dimethyl- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C10 H12 Cl N5
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1962 TO DATE)

5 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 138:34646

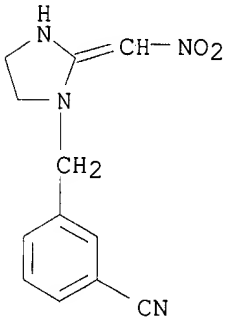
REFERENCE 2: 123:191172

REFERENCE 3: 116:41316

REFERENCE 4: 114:61934

REFERENCE 5: 113:132013

L27 ANSWER 39 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **120983-76-8** REGISTRY
CN Benzonitrile, 3-[[2-(nitromethylene)-1-imidazolidinyl]methyl]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C12 H12 N4 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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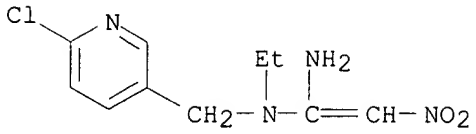
3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:30266

REFERENCE 2: 133:330893

REFERENCE 3: 111:7429

L27 ANSWER 40 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **120770-86-7** REGISTRY
CN 1,1-Ethenediamine, N-[(6-chloro-3-pyridinyl)methyl]-N-ethyl-2-nitro- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C10 H13 Cl N4 O2
CI COM
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

10 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
10 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 129:4587

REFERENCE 2: 125:296387

REFERENCE 3: 121:198499

REFERENCE 4: 120:270122

REFERENCE 5: 119:139023

REFERENCE 6: 115:201145

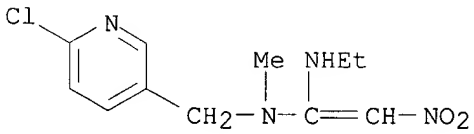
REFERENCE 7: 115:87524

REFERENCE 8: 115:66815

REFERENCE 9: 114:61936

REFERENCE 10: 110:231447

L27 ANSWER 41 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **120739-08-4** REGISTRY
CN 1,1-Ethenediamine, N-[(6-chloro-3-pyridinyl)methyl]-N'-ethyl-N-methyl-2-nitro- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C11 H15 Cl N4 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

9 REFERENCES IN FILE CA (1962 TO DATE)
9 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 133:85574

REFERENCE 2: 132:344438

REFERENCE 3: 129:4587

REFERENCE 4: 121:198499

REFERENCE 5: 120:270122

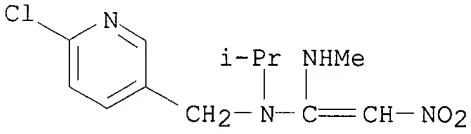
REFERENCE 6: 119:139023

REFERENCE 7: 114:61936

REFERENCE 8: 113:231399

REFERENCE 9: 110:231447

L27 ANSWER 42 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **120739-05-1** REGISTRY
CN 1,1-Ethenediamine, N-[(6-chloro-3-pyridinyl)methyl]-N'-methyl-N-(1-methylethyl)-2-nitro- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C12 H17 Cl N4 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

8 REFERENCES IN FILE CA (1962 TO DATE)
8 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 133:85574

REFERENCE 2: 132:344438

REFERENCE 3: 129:4587

REFERENCE 4: 121:198499

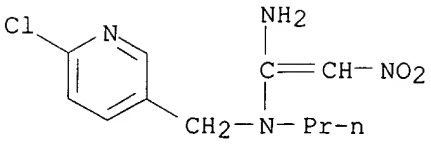
REFERENCE 5: 120:270122

REFERENCE 6: 119:139023

REFERENCE 7: 114:61936

REFERENCE 8: 110:231447

L27 ANSWER 43 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **120739-03-9** REGISTRY
CN 1,1-Ethenediamine, N-[(6-chloro-3-pyridinyl)methyl]-2-nitro-N-propyl- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C11 H15 Cl N4 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

8 REFERENCES IN FILE CA (1962 TO DATE)
8 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 133:85574

REFERENCE 2: 132:344438

REFERENCE 3: 129:4587

REFERENCE 4: 121:198499

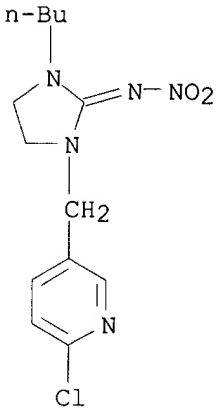
REFERENCE 5: 120:270122

REFERENCE 6: 119:139023

REFERENCE 7: 114:61936

REFERENCE 8: 110:231447

L27 ANSWER 44 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **117906-16-8** REGISTRY
CN 2-Imidazolidinimine, 1-butyl-3-[(6-chloro-3-pyridinyl)methyl]-N-nitro-
(9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C13 H18 Cl N5 O2
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7 REFERENCES IN FILE CA (1962 TO DATE)
7 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:284510

REFERENCE 2: 130:233620

REFERENCE 3: 129:157935

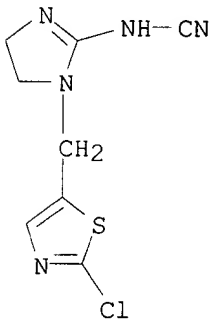
REFERENCE 4: 125:188277

REFERENCE 5: 116:250454

REFERENCE 6: 114:62097

REFERENCE 7: 110:8210

L27 ANSWER 45 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **111988-47-7** REGISTRY
CN Cyanamide, [1-[(2-chloro-5-thiazolyl)methyl]-4,5-dihydro-1H-imidazol-2-yl]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C8 H8 Cl N5 S
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL



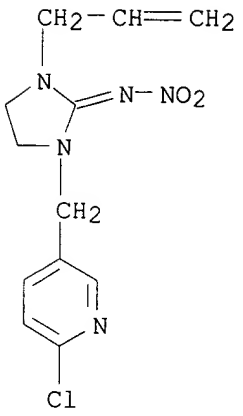
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 123:191172

REFERENCE 2: 108:21897

L27 ANSWER 46 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **105845-31-6** REGISTRY
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-3-(2-propenyl)- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C12 H14 Cl N5 O2
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

8 REFERENCES IN FILE CA (1962 TO DATE)
8 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:284510

REFERENCE 2: 130:233620

REFERENCE 3: 129:157935

REFERENCE 4: 125:188277

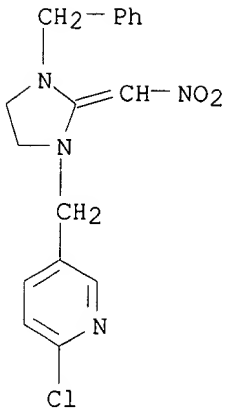
REFERENCE 5: 116:250454

REFERENCE 6: 114:62097

REFERENCE 7: 110:8210

REFERENCE 8: 106:28848

L27 ANSWER 47 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **105828-28-2** REGISTRY
CN Pyridine, 2-chloro-5-[[2-(nitromethylene)-3-(phenylmethyl)-1-imidazolidinyl]methyl]- (9CI) (CA INDEX NAME)
MF C17 H17 Cl N4 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

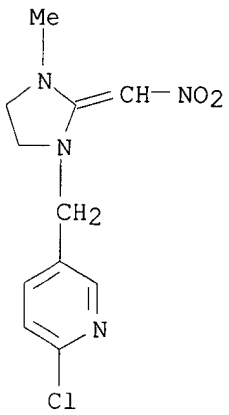
3 REFERENCES IN FILE CA (1962 TO DATE)
3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:284510

REFERENCE 2: 135:30264

REFERENCE 3: 106:28848

L27 ANSWER 48 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **105828-25-9** REGISTRY
CN Pyridine, 2-chloro-5-[[3-methyl-2-(nitromethylene)-1-imidazolidinyl]methyl]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C11 H13 Cl N4 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL



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4 REFERENCES IN FILE CA (1962 TO DATE)
4 REFERENCES IN FILE CAPLUS (1962 TO DATE)

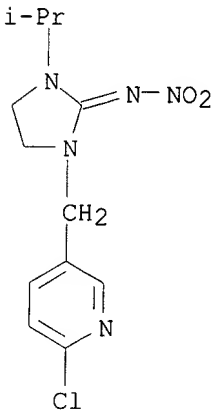
REFERENCE 1: 135:284510

REFERENCE 2: 135:30264

REFERENCE 3: 129:157935

REFERENCE 4: 106:28848

L27 ANSWER 49 OF 49 REGISTRY COPYRIGHT 2003 ACS
RN **105828-07-7** REGISTRY
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-3-(1-methylethyl)-N-nitro- (9CI) (CA INDEX NAME)
MF C12 H16 Cl N5 O2
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7 REFERENCES IN FILE CA (1962 TO DATE)
7 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:284510

REFERENCE 2: 130:233620

REFERENCE 3: 129:157935

REFERENCE 4: 116:250454

REFERENCE 5: 114:62097

REFERENCE 6: 110:8210

REFERENCE 7: 106:28848

=>

=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 15:59:27 ON 13 MAR 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 13 Mar 2003 VOL 138 ISS 11
FILE LAST UPDATED: 12 Mar 2003 (20030312/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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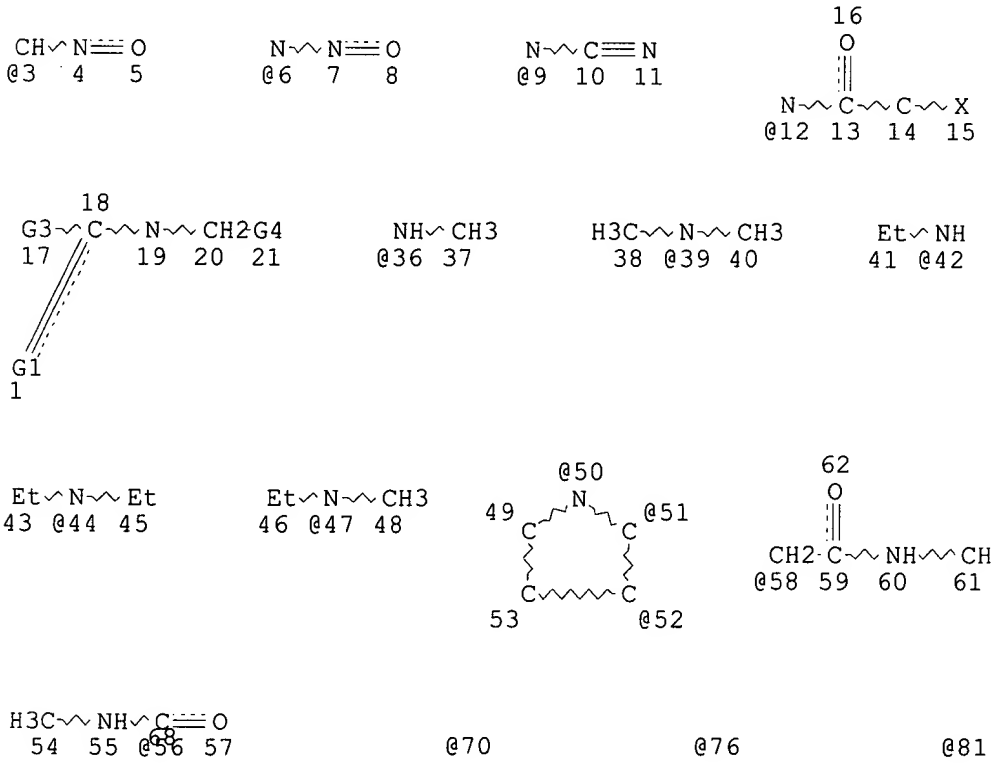
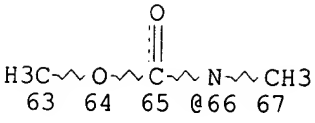
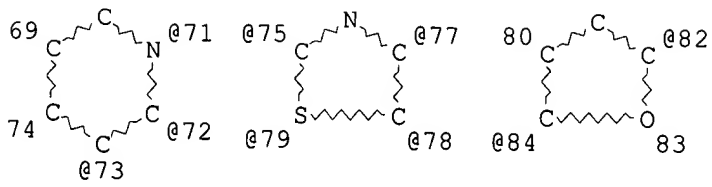
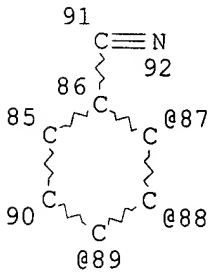
L7 STR



Page 1-A



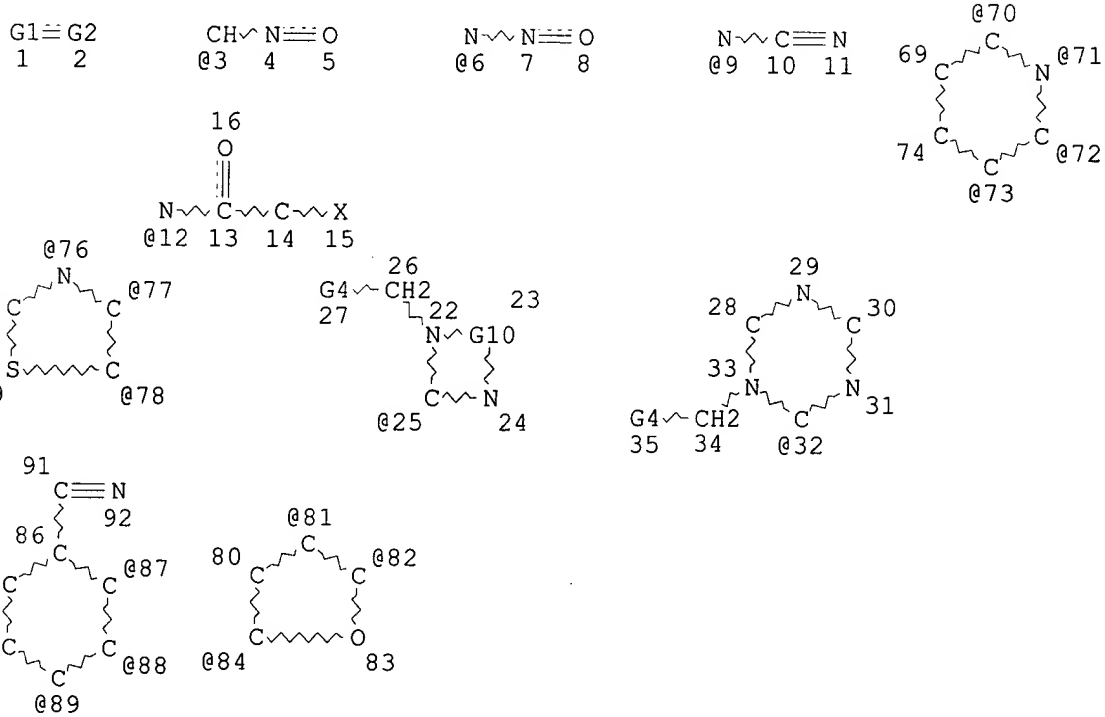




Page 2-A
VAR G1=3/6/9/12
VAR G3=ME/ET/NH2/36/39/42/44/47/50/51/52/56/58/66
VAR G4=70/71/72/73/76/77/78/79/75/81/82/84/87/88/89
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 77

STEREO ATTRIBUTES: NONE
L9 STR



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VAR G1=3/6/9/12
VAR G2=25/32
VAR G4=70/71/72/73/76/77/78/79/75/81/82/84/87/88/89
REP G10=(2-3) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  54

STEREO ATTRIBUTES: NONE
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L13         1574 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L12
L14           44 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L13 AND (FLY OR FLIES)
L28           26 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L13 AND (LIVESTOCK OR CATTLE
                 OR SHEEP OR POULT? OR COWS OR CHICKEN OR TURKEY OR HEN OR HENS
                 OR ROOSTER? PIG OR SOW OR BULL)
L29            2 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L28 AND L14


=>
=>

=> d ibib abs hitrn l29 1-2

L29  ANSWER 1 OF 2  HCAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:         2001:796229  HCAPLUS
DOCUMENT NUMBER:          135:299975
TITLE:                    Fly control using compounds with affinity to
                          nicotinic acetylcholine receptors
INVENTOR(S):              Miura, Hiroyuki; Akayama, Atsuo
PATENT ASSIGNEE(S):       Takeda Chemical Industries, Ltd., Japan
SOURCE:                   Eur. Pat. Appl., 13 pp.
                          CODEN: EPXXDW
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
     EP 1149532         A1   20011031       EP 2001-109715   20010420
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
     JP 2001302408      A2   20011031       JP 2000-131562   20000426
     US 2001046986      A1   20011129       US 2001-840820   20010425
PRIORITY APPLN. INFO.:                   JP 2000-131562   A  20000426
OTHER SOURCE(S):          MARPAT 135:299975
AB   Flies are controlled in livestock pens and
     poultry houses using compds. with affinity to nicotinic
     acetylcholine receptors.  The compds. (Markush given) are clothianidin,
     nitenpyram, imidacloprid, thiacloprid, acetamiprid, thiamethoxam and
     dinotefuran.
IT   138261-41-3, Imidacloprid 150824-47-8, Nitenpyram
     160430-64-8, Acetamiprid 165252-70-0, Dinotefuran
     210880-92-5, Clothianidin
     RL: AGR (Agricultural use); BUU (Biological use, unclassified); BIOL
     (Biological study); USES (Uses)
        (fly control using compds. with affinity to nicotinic
        acetylcholine receptors)
REFERENCE COUNT:          10    THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS
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RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:683443 HCAPLUS
DOCUMENT NUMBER: 133:330889
TITLE: Insecticide resistance and cross-resistance in the house **fly** (Diptera: Muscidae)
AUTHOR(S): Liu, Nannan; Yue, Xin
CORPORATE SOURCE: Department of Entomology and Plant Pathology, Auburn University, Auburn, AL, 36849-5413, USA
SOURCE: Journal of Economic Entomology (2000), 93(4), 1269-1275
CODEN: JEENAI; ISSN: 0022-0493
PUBLISHER: Entomological Society of America
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A house **fly** strain, ALHF, was collected from a **poultry** farm in Alabama after a control failure with permethrin, and further selected in the lab. with permethrin for five generations. The level of resistance to permethrin in ALHF was increased rapidly from an initial 260-fold to 1,800-fold after selection. Incomplete suppression of permethrin resistance by piperonyl butoxide (PBO) and S,S,S,-tributylphosphorotrithioate (DEF) reveals that P 450 monooxygenase- and hydrolase-mediated detoxication, and one or more addnl. mechanisms are involved in resistance to permethrin. The ALHF strain showed a great ability to develop resistance or cross-resistance to different insecticides within and outside the pyrethroid group including some relatively new insecticides. Resistance to beta-cypermethrin, cypermethrin, deltamethrin, and propoxur (2,400-4,200-, 10,000-, and >290-fold, resp., compared with a susceptible strain, aabys) in ALHF house **flies** was partially or mostly suppressed by PBO and DEF, indicating that P 450 monooxygenases and hydrolases are involved in resistance to these insecticides. Partial redn. in resistance with PBO and DEF implies that multiresistance mechanisms are responsible for resistance. Fifteen- and more than fourfold resistance and cross-resistance to chlorpyrifos and imidacloprid, resp., were not effected by PBO or DEF, indicating that P 450 monooxygenases and hydrolases are not involved in resistance to these two insecticides. Forty-nine-fold cross-resistance to fipronil was mostly suppressed by PBO and DEF, revealing that monooxygenases are a major mechanism of cross-resistance to fipronil. Multiresistance mechanisms in the ALHF house **fly** strain, however, do not confer cross-resistance to spinosad, a novel insecticide derived from the bacterium Saccharopolyspora spinosa. Thus, we propose that spinosad be used as a potential insecticide against house **fly** pests, esp. resistant **flies**.
IT **138261-41-3**, Imidacloprid
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(resistance in house **fly** to)
REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=>
=> select hit rn l29 1-2
E69 THROUGH E73 ASSIGNED

=> fil reg
FILE 'REGISTRY' ENTERED AT 16:00:09 ON 13 MAR 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 12 MAR 2003 HIGHEST RN 498527-50-7
DICTIONARY FILE UPDATES: 12 MAR 2003 HIGHEST RN 498527-50-7

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=>
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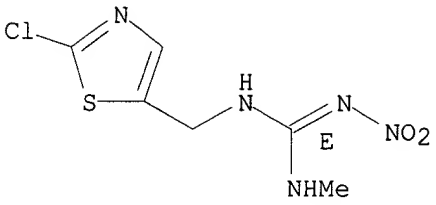
=> s e69-e73
1 138261-41-3/BI
(138261-41-3/RN)
1 150824-47-8/BI
(150824-47-8/RN)
1 160430-64-8/BI
(160430-64-8/RN)
1 165252-70-0/BI
(165252-70-0/RN)
1 210880-92-5/BI
(210880-92-5/RN)
L30 5 (138261-41-3/BI OR 150824-47-8/BI OR 160430-64-8/BI OR 165252-70-0/BI OR 210880-92-5/BI)

=>
=>

=> d ide can l30 1-5

L30 ANSWER 1 OF 5 REGISTRY COPYRIGHT 2003 ACS
RN **210880-92-5** REGISTRY
CN Guanidine, N-[(2-chloro-5-thiazolyl)methyl]-N'-methyl-N''-nitro-, [C(E)]- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Clothianidin
CN TI 435
FS STEREOSEARCH
DR 205510-53-8
MF C6 H8 Cl N5 O2 S
CI COM
SR CA
LC STN Files: BIOSIS, CA, CAPLUS, CASREACT, CBNB, TOXCENTER, USPAT2, USPATFULL

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
44 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 138:149060

REFERENCE 2: 138:132444

REFERENCE 3: 138:68344

REFERENCE 4: 138:34684

REFERENCE 5: 138:20916

REFERENCE 6: 138:20885

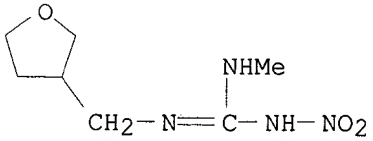
REFERENCE 7: 138:12164

REFERENCE 8: 137:274435

REFERENCE 9: 137:274429

REFERENCE 10: 137:247079

L30 ANSWER 2 OF 5 REGISTRY COPYRIGHT 2003 ACS
RN **165252-70-0** REGISTRY
CN Guanidine, N-methyl-N'-nitro-N''-[(tetrahydro-3-furanyl)methyl]- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Dinotefuran
CN MTI 446
FS 3D CONCORD
DR 222540-72-9
MF C7 H14 N4 O3
CI COM
SR CA
LC STN Files: AGRICOLA, BIOSIS, CA, CAPLUS, CASREACT, CBNB, CIN, MEDLINE, PROMT, TOXCENTER, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

84 REFERENCES IN FILE CA (1962 TO DATE)
7 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
85 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 138:149060

REFERENCE 2: 138:149056

REFERENCE 3: 138:132444

REFERENCE 4: 138:20925

REFERENCE 5: 138:20924

REFERENCE 6: 137:347896

REFERENCE 7: 137:274435

REFERENCE 8: 137:212273

REFERENCE 9: 137:121056

REFERENCE 10: 137:74811

L30 ANSWER 3 OF 5 REGISTRY COPYRIGHT 2003 ACS
RN **160430-64-8** REGISTRY
CN Ethanimidamide, N-[(6-chloro-3-pyridinyl)methyl]-N'-cyano-N-methyl-, (1E)-(9CI) (CA INDEX NAME)
OTHER NAMES:
CN Acetamiprid
CN Assail
CN Mospilan
CN NI 25
CN NI 25 (pesticide)
CN Pristine
FS STEREOSEARCH
DR 135410-20-7
MF C10 H11 Cl N4
CI COM
SR CA
LC STN Files: AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, CA, CAPLUS, CASREACT, CBNB, CHEMLIST, CIN, CSCHEM, MRCK*, PROMT, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

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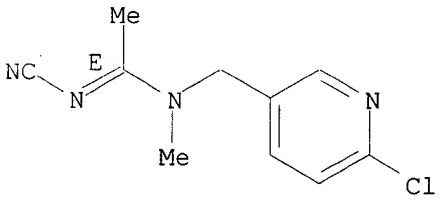


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

194 REFERENCES IN FILE CA (1962 TO DATE)
25 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
195 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 138:149060

REFERENCE 2: 138:132444

REFERENCE 3: 138:124962

REFERENCE 4: 138:118826

REFERENCE 5: 138:68344

REFERENCE 6: 138:34684

REFERENCE 7: 138:34649

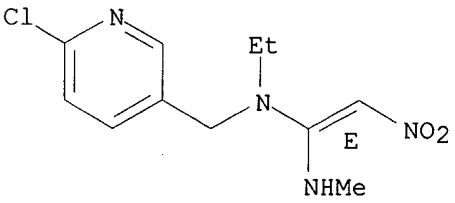
REFERENCE 8: 138:20896

REFERENCE 9: 138:12164

REFERENCE 10: 137:381261

L30 ANSWER 4 OF 5 REGISTRY COPYRIGHT 2003 ACS
RN **150824-47-8** REGISTRY
CN 1,1-Ethenediamine, N-[(6-chloro-3-pyridinyl)methyl]-N-ethyl-N'-methyl-2-nitro-, (1E)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1,1-Ethenediamine, N-[(6-chloro-3-pyridinyl)methyl]-N-ethyl-N'-methyl-2-nitro-, (E)-
OTHER NAMES:
CN (E)-Nitenpyram
CN Nitenpyram
CN TI 304
FS STEREOSEARCH
MF C11 H15 Cl N4 O2
CI COM
SR CAS Registry Services
LC STN Files: AGRICOLA, BIOBUSINESS, BIOSIS, CA, CAPLUS, CBNB, CIN, MRCK*, PROMT, RTECS*, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: WHO

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

86 REFERENCES IN FILE CA (1962 TO DATE)
13 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
88 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 138:149060

REFERENCE 2: 138:149056

REFERENCE 3: 138:132444

REFERENCE 4: 138:118826

REFERENCE 5: 138:34684

REFERENCE 6: 138:12164

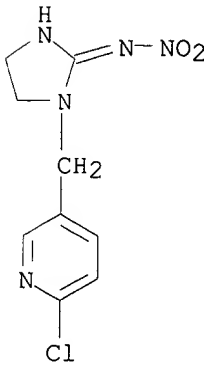
REFERENCE 7: 137:364868

REFERENCE 8: 137:347896

REFERENCE 9: 137:334257

REFERENCE 10: 137:290159

L30 ANSWER 5 OF 5 REGISTRY COPYRIGHT 2003 ACS
RN **138261-41-3** REGISTRY
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1-[(6-Chloro-3-pyridinyl)methyl]-4,5-dihydro-N-nitro-1H-imidazol-2-amine
CN 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine
CN Admire
CN Advantage Flea Adulticide
CN BAY-NTN 33893
CN Confidor
CN Confidor 200SL
CN Confidor SL
CN CP 1
CN Gaucho
CN Imidacloprid
CN Merit
CN Merit (insecticide)
CN NTN 33893
CN NTN 33893-240FS
CN Provado
AR 105827-78-9
MF C9 H10 Cl N5 O2
CI COM
SR CAS Registry Services
LC STN Files: AGRICOLA, AQUIRE, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN, EMBASE, MEDLINE, NIOSHTIC, PROMT, RTECS*, TOXCENTER, ULIDAT, USPAT2, USPATFULL, VETU
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1087 REFERENCES IN FILE CA (1962 TO DATE)
60 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1091 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 138:158105

REFERENCE 2: 138:149060

REFERENCE 3: 138:149056

REFERENCE 4: 138:149034

REFERENCE 5: 138:149016

REFERENCE 6: 138:132585

REFERENCE 7: 138:132552

REFERENCE 8: 138:132444

REFERENCE 9: 138:118823

REFERENCE 10: 138:102386

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FILE COVERS 1907 - 13 Mar 2003  VOL 138 ISS 11
FILE LAST UPDATED: 12 Mar 2003  (20030312/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


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L31         24 L28 NOT L29

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L31  ANSWER 1 OF 24  HCAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:        2002:749732  HCAPLUS
DOCUMENT NUMBER:         137:364868
TITLE:                   Effects of mutations of a glutamine residue in loop D
                         of the .alpha.7 nicotinic acetylcholine receptor on
                         agonist profiles for neonicotinoid insecticides and
                         related ligands
AUTHOR(S):               Shimomura, Masaru; Okuda, Hiroshi; Matsuda, Kazuhiko;
                         Komai, Koichiro; Akamatsu, Miki; Sattelle, David B.
CORPORATE SOURCE:        Department of Agricultural Chemistry, Faculty of
                         Agriculture, Kinki University, Nara, 631-8505, Japan
SOURCE:                  British Journal of Pharmacology (2002), 137(2),
                         162-169
                         CODEN: BJPCBM; ISSN: 0007-1188
PUBLISHER:               Nature Publishing Group
DOCUMENT TYPE:           Journal
LANGUAGE:                English
AB   1 Neonicotinoid insecticides are agonists of insect nicotinic
     acetylcholine receptors (AChRs) and show selective toxicity for insects
     over vertebrates.  To elucidate the mol. basis of the selectivity, amino
     acid residues influencing neonicotinoid sensitivity were investigated by
     site-directed mutagenesis of the chicken .alpha.7 nicotinic AChR
     subunit, based on the crystal structure of an ACh binding protein (AChBP).
     2 In the ligand binding site of AChBP, Q55 in loop D is close to Y164 in
     loop F that corresponds to G189 of the .alpha.7 nicotinic receptor.  Since
     Q55 of AChBP is preserved as Q79 in the .alpha.7 nicotinic receptor and
     the G189D and G189E mutations have been found to reduce the neonicotinoid
```

sensitivity, we investigated effects of Q79E, Q79K and Q79R mutations on the neonicotinoid sensitivity of the .alpha.7 receptor expressed in Xenopus laevis oocytes to evaluate contributions of the glutamine residue to nicotinic AChR-neonicotinoid interactions. 3 The Q79E mutation markedly reduced neonicotinoid sensitivity of the .alpha.7 nicotinic AChR whereas the Q79K and Q79R mutations increased sensitivity, suggesting electronic interactions of the neonicotinoids with the added residues. 4 By contrast, the Q79E mutation scarcely influenced responses of the .alpha.7 nicotinic receptor to ACh, (-)-nicotine and desnitro-imidacloprid (DN-IMI), an imidacloprid deriv. lacking the nitro group, whereas the Q79K and Q79R mutations reduced the sensitivity to these ligands. The results indicate that the glutamine residue of the .alpha.7 nicotinic receptor is likely to be located close to the nitro group of the insecticides in the nicotinic receptor-insecticide complex.

IT **138261-41-3**, Imidacloprid **150824-47-8**, Nitenpyram
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); BIOL (Biological study)
(resistance to; effects of mutations of glutamine residue in loop D of .alpha.7 nicotinic acetylcholine receptor on agonist profiles for neonicotinoid insecticides and related ligands)

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 2 OF 24 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:725522 HCAPLUS
DOCUMENT NUMBER: 137:231593
TITLE: Objections to tolerances established for certain pesticide chemicals
CORPORATE SOURCE: Environmental Protection Agency (EPA), USA
SOURCE: Federal Register (2002), 67(118), 41628-41635, 19 Jun 2002
CODEN: FEREAC; ISSN: 0097-6326
PUBLISHER: Superintendent of Documents
DOCUMENT TYPE: Journal
LANGUAGE: English

AB On Feb. 25, 2002, Mar. 19, 2002, and May 7, 2002, the Natural Resources Defense Council (NRDC) filed objections with EPA regarding final rules establishing tolerances under section 408 of the Federal Food, Drug, and Cosmetic Act (FFDCA), 21 U.S.C. 346a, for the following pesticides on the crops noted: 2,4-D (soybeans), halosulfuron Me (melons, asparagus), pymetrozine (cotton, undelinted seed; cotton gin byproducts; fruiting vegetables; head and stem Brassica vegetables; cucurbit vegetables; leafy vegetables; leafy Brassica and turnip greens; hops, dried; and pecans), imidacloprid (blueberries), mepiquat (cottonseed; cotton, gin byproducts; meat byproducts of **cattle**, goats, hogs, horses, and **sheep**), bifenazate (apple, wet pomace; cotton, undelinted seed; cotton, gin byproducts, pome fruit group; grapes; grapes, raisins, hops, dried cones; nectarines; peaches; plums; strawberries; and milk, fat, meat, and meat byproducts of **cattle**, goats, horses, hogs, and **sheep**), zeta-cypermethrin (succulent, shelled peas and beans; dried, shelled peas and beans, except soybeans; soybean, seed; fruiting vegetables, except cucurbits; sorghum, grain, forage, stover; wheat, grain, forage, hay, straw; aspirated grain fractions; meat of **cattle**, goats, hogs, horses, **sheep**), diflubenzuron (pears). NRDC's objections concern a no. of issues under section 408 of the FFDCA including the addnl. 10X safety factor for the protection of infants and children and aggregate exposure to pesticide chem. residues. This document seeks comment on the NRDC objections.

IT **138261-41-3**, Imidacloprid
RL: ADV (Adverse effect, including toxicity); POL (Pollutant); BIOL (Biological study); OCCU (Occurrence)
(tolerances for pesticides of food and feed)

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 3 OF 24 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:630888 HCAPLUS
DOCUMENT NUMBER: 137:231584
TITLE: Extension of tolerances for emergency exemptions (multiple chemicals)
CORPORATE SOURCE: Environmental Protection Agency, Office of Pesticide Programs, Environmental Protection Agency, Washington, DC, 20460, USA
SOURCE: Federal Register (2002), 67(137), 46878-46884, 17 Jul 2002
CODEN: FEREAC; ISSN: 0097-6326
PUBLISHER: Superintendent of Documents
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Time-limited tolerances are extended for the pesticides bifenazate, coumaphos, dimethenamid, diuron, emamectin benzoate, fenbuconazole, fluroxypyr 1-methylheptyl ester, hexythiazox, imidacloprid, metolachlor, myclobutanil, pendimethalin, sulfentrazone, tebuconazole, and thiabendazole. These actions are in response to EPA's granting of emergency exemptions under section 18 of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) authorizing use of these pesticides. Section 408(l)(6) of the Federal Food, Drug, and Cosmetic Act (FFDCA) requires EPA to establish a time-limited tolerance or exemption from the requirement for a tolerance for pesticide chem. residues in food that will result from the use of a pesticide under an emergency exemption granted by EPA.
IT **138261-41-3**, Imidacloprid
RL: BSU (Biological study, unclassified); POL (Pollutant); BIOL (Biological study); OCCU (Occurrence)
(tolerance for pesticides of food)

L31 ANSWER 4 OF 24 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:586328 HCAPLUS
DOCUMENT NUMBER: 138:132444
TITLE: Evaluation of affinity of neonicotinoid insecticides for rat brain nicotinic acetylcholine receptors by [3H] epibatidine-binding assay
AUTHOR(S): Okumoto, Takashi; Ozoe, Yoshihisa
CORPORATE SOURCE: Department of Life Science and Biotechnology, Faculty of Life and Environmental Science, Shimane University, Matsue, Shimane, 690-8504, Japan
SOURCE: Nippon Noyaku Gakkaishi (2002), 27(2), 145-146
CODEN: NNGADV; ISSN: 0385-1559
PUBLISHER: Nippon Noyaku Gakkai
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The affinity of neonicotinoids for rat brain nAChRs was evaluated under the optimized (3H)EPI-binding conditions. Imidacloprid, acetamiprid, and clothianidin exhibited higher activity than did the other compds.; these three compds. at 10 .mu.M inhibited specific (3H)EPI binding by 60.6, 56.3, and 33.6%. resp. The other compds., including the enantiomers of dinotefuran, had little inhibitory activity at 10 .mu.M, indicating almost no significant interaction with .alpha.4.beta.2-nAChRs in rat brain. Given that the IC50 values of imidacloprid and acetamiprid are approx. 10 .mu.M, the Ki values, calcd. according to the Cheng-Prusoff equation, was .apprx.5 .mu.M. Electrophysiol., imidacloprid was reported to be a partial agonist with an ECs, of >79 .mu.M in **chicken** .alpha.4.beta.2-nAChRs expressed in Xenopus oocytes. The rank order in terms of activity in vitro of the tested compds. appears to be in general agreement with that of their acute oral toxicity in rats, as well as that of their potency measured based on (3H)nicotine binding to rat recombinant

.alpha.4.beta.2-nAChRs. Considering the range of nanomolar activity of these compds. in (3H) EPI assays using a cockroach nerve prepn., the data presented here indicate that all tested compds. are highly selective for cockroach nAChRs vs. rat .alpha.4.beta.2-nAChRs.

IT **138261-41-3**, Imidacloprid **150824-47-8**, Nitenpyram **160430-64-8**, Acetamiprid **165252-70-0**, Dinotefuran **210880-92-5**, Clothianidin **322639-07-6**, (S)-Dinotefuran **406466-53-3**
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(evaluation of affinity of neonicotinoid insecticides for rat brain nicotinic acetylcholine receptors by epibatidine-binding assay)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 5 OF 24 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:354356 HCAPLUS
DOCUMENT NUMBER: 137:32290
TITLE: Acetamiprid; pesticide tolerance
CORPORATE SOURCE: Environmental Protection Agency, Office of Pesticide Programs, Environmental Protection Agency, Washington, DC, 20460, USA
SOURCE: Federal Register (2002), 67(59), 14649-14660, 27 Mar 2002
CODEN: FEREAC; ISSN: 0097-6326
PUBLISHER: Superintendent of Documents
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Tolerances for residues are established for acetamiprid N1-[(6-chloro-3-pyridyl)methyl]-N2-cyano-N1-methylacetamidine in or on citrus dried pulp, citrus fruit group, cotton gin byproducts, cotton undelinted seed, grape, fruiting vegetable group, leafy brassica vegetable group, leafy vegetable (except brassica) group, pome fruit group, and tomato paste; and tolerances for the combined residues of acetamiprid and IM-2-1 N1-[(6-chloro-3-pyridyl)methyl]-N2-cyano-acetamidine in or on fat, meat, and meat byproducts of **cattle**, hog, horse, goat, and **sheep**; milk; **poultry** eggs, fat, liver, and meat. Aventis Crop Science requested these tolerances under the Federal Food, Drug, and Cosmetic Act, as amended by the Food Quality Protection Act of 1996.

IT **160430-64-8**, Acetamiprid **190604-92-3**
RL: ADV (Adverse effect, including toxicity); POL (Pollutant); BIOL (Biological study); OCCU (Occurrence)
(tolerance for acetamiprid of food and feed)

L31 ANSWER 6 OF 24 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:220309 HCAPLUS
DOCUMENT NUMBER: 136:243306
TITLE: Pest control by transforming target organisms with genes for pesticide precursor-activating enzymes and application of pesticide precursors
INVENTOR(S): Craig, Roger; Savakis, Charalambos
PATENT ASSIGNEE(S): Minos Biosystems Limited, UK
SOURCE: PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002021925	A1	20020321	WO 2001-GB4065	20010911

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2001087853 A5 20020326 AU 2001-87853 20010911
PRIORITY APPLN. INFO.: GB 2000-22193 A 20000911
US 2000-232366P P 20000914
WO 2001-GB4065 W 20010911

AB A method of controlling arthropod pests that uses applications of propesticides that are activated by enzymes of the organism being protected is described. The susceptible organisms are transformed with an expression construct for a gene for an enzyme that converts the precursor to the active form. Organisms treated with the precursor convert it to the active pesticide only when the gene for the enzyme is induced. This limits the formation of the pesticide to the immediate vicinity of the organism. The development of a system for activating acephate by amidase-dependent cleavage to form methamidophos is described. Cloning of amidase genes of Drosophila melanogaster by first identifying candidate genes in sequence databases is described.

IT **117906-15-7**
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(as pesticide precursor; pest control by transforming target organisms with genes for pesticide precursor-activating enzymes and application of pesticide precursors)

IT **138261-41-3**, Imidacloprid
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(as pesticide, application as precursor; pest control by transforming target organisms with genes for pesticide precursor-activating enzymes and application of pesticide precursors)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 7 OF 24 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:767469 HCAPLUS
DOCUMENT NUMBER: 135:299970
TITLE: Insecticides containing salicylate esters for wood preservation
INVENTOR(S): Sato, Toshio; Nakamura, Norihiko; Goto, Shinji
PATENT ASSIGNEE(S): Yoshitomi Fine Chemical K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 26 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001294506	A2	20011023	JP 2000-112664	20000413

PRIORITY APPLN. INFO.: JP 2000-112664 20000413
OTHER SOURCE(S): MARPAT 135:299970

AB The insecticides, which are esp. useful for controlling termite and not toxic to humans, **livestock**, or environment, contain 2-OHC6H4CO2W1R1 [R1 = (un)substituted Ph, C2-12 (hydroxy)alkyl, C2-12 (hydroxy)alkenyl, C2-12 (hydroxy)alkynyl, W1 = bond, C1-6 alkylene, C2-6 alkenylene, C2-6 alkynylene]. The salicylates also serve as enhancers for com. available insecticides, showing synergistic effect. Thus, quartz

sand treated with Ph salicylate showed 100% termiticidal activity.
IT **138261-41-3D**, Imidacloprid, mixts. contg. salicylate esters
366798-72-3, Phenyl salicylate-imidacloprid mixt.
366798-78-9, Benzyl salicylate-imidacloprid mixt.
366798-84-7 366798-90-5 366798-96-1
366799-02-2 366799-08-8 366799-14-6
366799-20-4 366799-28-2
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(insecticides contg. salicylate esters for wood preservation)

L31 ANSWER 8 OF 24 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:650459 HCAPLUS
DOCUMENT NUMBER: 135:191669
TITLE: Polymer foams containing acetamiprid, silafluofen, and their decomposition products, and showing long-lasting antitermite activity, and their manufacture
INVENTOR(S): Nishimoto, Koichi
PATENT ASSIGNEE(S): Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001240508	A2	20010904	JP 2000-56300	20000301

PRIORITY APPLN. INFO.: JP 2000-56300 20000301
AB Title foams, which are not toxic to humans and **livestock** and show good alkali stability, are manufd. by melting synthetic polymer materials contg. acetamiprid and silafluofen at a molding temp. to partially decomp. them, and expansion molding the compns. The foams are useful for antitermite thermal and sound insulators for building materials. Thus, polystyrene foam was kneaded with a acetamiprid-silafluofen mixt. at 180-200.degree. and extruded to give a foam sheet, which showed synergistic antitermite activity.
IT **160430-64-8D**, Acetamiprid, decompn. products **357186-08-4**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(manuf. of antitermite polymer foams contg. acetamiprid, silafluofen, and their decompn. products)

L31 ANSWER 9 OF 24 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:617863 HCAPLUS
DOCUMENT NUMBER: 135:200445
TITLE: Pharmaceutical or veterinary paste formulations containing silica and viscosity modifier
INVENTOR(S): Jun, Chen
PATENT ASSIGNEE(S): Merial Limited, UK
SOURCE: PCT Int. Appl., 64 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001060409	A1	20010823	WO 2001-EP1155	20010205

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 2003007958	A1	20030109	US 2000-504741	20000216
EP 1263467	A1	20021211	EP 2001-905731	20010205

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRIORITY APPLN. INFO.:	US 2000-504741	A	20000216
	WO 2001-EP1155	W	20010205

AB A pharmaceutical or veterinary paste formulation comprises a drug, fumed silica, a viscosity modifier, a hydrophilic carrier, optionally, an absorbent and a dye, stabilizer, surfactant, or preservative. This invention also provides for methods of using these formulations for treating various disease states as well. Thus, a paste was prepd. contg. 3-(cyclopropylmethoxy)-5,5-dimethyl-4-((4-methylsulfonyl)phenyl)-5H-furan-2-one (COX-2 inhibitor) 0.82, TiO2 0.2, MgCO3 2, fumed silica 4.25, and PEG-300 0.4% and triacetin qs.

IT **138261-41-3**, Imidacloprid
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pharmaceutical or veterinary paste formulations contg. silica and viscosity modifier)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 10 OF 24 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER:	2001:580533 HCAPLUS
DOCUMENT NUMBER:	135:191645
TITLE:	Insecticidal and neural activities of candidate photoaffinity probes for neonicotinoid binding sites
AUTHOR(S):	Matsuda, Kazuhiko; Ihara, Makoto; Nishimura, Keiichiro; Sattelle, David B.; Komai, Koichiro
CORPORATE SOURCE:	Department of Agricultural Chemistry, Kinki University, Nara, 631-8505, Japan
SOURCE:	Bioscience, Biotechnology, and Biochemistry (2001), 65(7), 1534-1541 CODEN: BBBIEJ; ISSN: 0916-8451
PUBLISHER:	Japan Society for Bioscience, Biotechnology, and Agrochemistry
DOCUMENT TYPE:	Journal
LANGUAGE:	English

AB Photoreactive derivs. of imidacloprid and its nitromethylene analog were synthesized as candidate photoaffinity probes for identifying the amino acid residues of nicotinic acetylcholine receptors (nAChRs) that interact with the neonicotinoid insecticides. When the candidate probes were injected into American cockroaches, the nerve cord neural activity initially increased, then ceased and death of the insect followed. Both the nerve cord and toxicity were enhanced by changing the photoreactive substituent from the para position to the meta position on the spacer benzyl moiety. When tested on a Drosophila SAD/**chicken** .beta.2 hybrid, recombinant nAChR expressed in Xenopus oocytes, the nitromethylene candidate probes showed agonist activity similar to that previously obsd. for imidacloprid.

IT **138261-41-3**, Imidacloprid
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(imidacloprid derivs. as photoaffinity probes for nicotinic acetylcholine receptors, and their insecticidal and neural activities)

IT **101336-63-4P 357186-63-1P 357186-64-2P**
357186-65-3P 357186-66-4P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(imidacloprid derivs. as photoaffinity probes for nicotinic acetylcholine receptors, and their insecticidal and neural activities)
REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 11 OF 24 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:525899 HCAPLUS
DOCUMENT NUMBER: 135:127192
TITLE: Nonaqueous compositions for administration of pharmaceuticals or agrochemicals or biocides
INVENTOR(S): Campbell, William R.; Omilinsky, Barry A.
PATENT ASSIGNEE(S): Blue Ridge Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001051028	A2	20010719	WO 2001-US876	20010112
WO 2001051028	A3	20020307		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-483084 A 20000114

AB The present invention provides non-aq. compns. which comprise a pharmacol. or biol. active compd., an emulsifier, a polyol, and benzyl alc. The compns. are useful for administering the pharmacol. or biol. active compds. which they contain to animals, plants, or ground surfaces. In preferred embodiments, the pharmacol. or biol. active compds. may be water-insol. or water-labile. The compns. of the present invention allow these compds. to be solubilized and conveniently transported to a site of application in a non-aq. form, and then dild. in an aq. soln. In a particularly preferred embodiment, the compd. is ivermectin and is administered in the drinking water of **poultry**. The compns. of the present invention may also contain multiple pharmacol. or biol. active compds. which are administrated simultaneously. The present invention also provides methods of administering the compds. In the most preferred embodiment, the compds. may be administered in the drinking water of animals to be treated with the pharmacol. or biol. active compd. In other embodiments, the compns. may be topically applied to the animals or plants to be treated, or sprayed onto plants, animals, or a ground surface to be treated with the active compds. A nonaq. formulation of ivermectin was prepd. and dild. into the drinking water of male **turkeys**. The formulation was effective in completely eliminating any visible signs of roundworm infestation.

IT **138261-41-3**, Imidacloprid
RL: AGR (Agricultural use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nonaq. compns. for administration of pharmaceuticals or agrochems. or

biocides)

L31 ANSWER 12 OF 24 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:417130 HCAPLUS
DOCUMENT NUMBER: 135:24710
TITLE: Pour-on formulations for control of parasites in animals
INVENTOR(S): Hacket, Kristina Clare; Lowe, Lionel Barry; Rothwell, James Terence
PATENT ASSIGNEE(S): Eli Lilly and Company, USA
SOURCE: PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001040446	A1	20010607	WO 2000-US30143	20001117
WO 2001040446	A3	20020117		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1237408	A2	20020911	EP 2000-982076	20001117
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.: AU 1999-4416 A 19991202
WO 2000-US30143 W 20001117

AB A non-irritant topically acceptable carrier is selected from the group consisting of: (a) at least 1 of (i) tripropylene glycol Me ether and dipropylene glycol Me ether, and (ii) 1 of alc., wool wax, and propylene glycol, wherein (i) is present at 60% of the carrier; (b) (i) 1 of octyl palmitate, octyl stearate and glyceryl tricaprylate/caprate, and (ii) 1 of dioctyl succinate, iso-Pr myristate, cetearyl octanoate, propylene glycol myristyl ether propionate, iso-Pr palmitate, iso-Pr laurate, isocetyl stearate, oleic acid and Me oleate. Spinosad in octyl palmitate/iso-Pr myristate/dioctyl succinate at 10 mg/kg, with or without UV blockers, eradicated lice and at 2 mg/kg, it gave 85-98% efficacy.

IT **138261-41-3**, Imidacloprid
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pour-on formulations for control of parasites in animals)

L31 ANSWER 13 OF 24 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:52145 HCAPLUS
DOCUMENT NUMBER: 135:32895
TITLE: Thiamethoxam; pesticide tolerances for emergency exemptions
CORPORATE SOURCE: Environmental Protection Agency, Office of Pesticide Programs, Environmental Protection Agency, Washington, DC, 20460, USA
SOURCE: Federal Register (2000), 65(245), 79755-79762, 20 Dec 2000
CODEN: FEREAC; ISSN: 0097-6326
PUBLISHER: Superintendent of Documents

DOCUMENT TYPE: Journal
LANGUAGE: English
AB Time-limited tolerances are established for combined residues of thiamethoxam and its CGA-322704 metabolite in or on cotton, milk, and meat and meat byproducts of **cattle**, goats, horses and **sheep** . This action is in response to EPA's granting fo an emergency exemption under section 18 of the Federal Insecticide, Fungicide, and Rodenticide Act authorizing use of the pesticide on cotton. This regulation establishes max. permissible levels for residues of thiamethoxam in this food commodity. These tolerances will expire and are revoked on Dec. 31, 2002.
IT **131748-59-9**, CGA 322704
RL: ADV (Adverse effect, including toxicity); POL (Pollutant); BIOL (Biological study); OCCU (Occurrence)
(tolerance for thiamethoxam of food and feed)

L31 ANSWER 14 OF 24 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:43234 HCAPLUS
DOCUMENT NUMBER: 134:251392
TITLE: Thiamethoxam; Pesticide tolerance
CORPORATE SOURCE: Environmental Protection Agency, USA
SOURCE: Federal Register (2000), 65(246), 80343-80353, 21 Dec 2000
CODEN: FEREAC; ISSN: 0097-6326
PUBLISHER: Superintendent of Documents
DOCUMENT TYPE: Journal
LANGUAGE: English
AB This regulation establishes tolerances for combined residues of thiamethoxam and its metabolite in or on barley, canola, cotton, sorghum, wheat, milk, and the meat and meat byproducts of **cattle**, goats, hogs, horses, and **sheep**. Novartis Crop Protection, Inc. requested this tolerance under the Federal Food, Drug, and Cosmetic Act, as amended by the Food Quality Protection Act of 1996.
IT **131748-59-9**
RL: ADV (Adverse effect, including toxicity); POL (Pollutant); BIOL (Biological study); OCCU (Occurrence)
(tolerance for thiamethoxam of food and feed)

L31 ANSWER 15 OF 24 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:520684 HCAPLUS
DOCUMENT NUMBER: 133:188319
TITLE: Role of loop D of the .alpha.7 nicotinic acetylcholine receptor in its interaction with the insecticide imidacloprid and related neonicotinoids
AUTHOR(S): Matsuda, Kazuhiko; Shimomura, Masaru; Kondo, Yumi; Ihara, Makoto; Hashigami, Kaori; Yoshida, Naofumi; Raymond, Valerie; Mongan, Nigel P.; Freeman, John C.; Komai, Koichiro; Sattelle, David B.
CORPORATE SOURCE: Department of Agricultural Chemistry, Faculty of Agriculture, Kinki University, Nara, 631-8505, Japan
SOURCE: British Journal of Pharmacology (2000), 130(5), 981-986
CODEN: BJPCBM; ISSN: 0007-1188
PUBLISHER: Nature Publishing Group
DOCUMENT TYPE: Journal
LANGUAGE: English
AB 1 The nitroguanidine insecticide imidacloprid along with a second generation of related compds. including nitenpyram, all nicotinic acetylcholine (ACh) receptor ligands, are used increasingly in many countries. Site-directed mutagenesis and heterologous expression in Xenopus laevis oocytes have been deployed to investigate mutants (G189D and G189E) of the **chicken** .alpha.7 homomer-forming nicotinic receptor subunit which are predicted to enhance the neg. charge at the

neg. subsite (loop D) of the ACh binding site. 2 Xenopus oocytes expressing wild-type .alpha.7 nicotinic receptors respond to imidacloprid with rapid inward currents. Imidacloprid and nitenpyram are partial agonists, whereas ACh, (-)-nicotine and (+)-epibatidine are full agonists. 3 Compared to wild-type .alpha.7, the mutant G189D and G189E receptors are much less sensitive to the insecticides, whereas their sensitivity to (-)-nicotine, ACh and (+)-epibatidine is only slightly reduced. In contrast, G189N and G189Q mutants are sensitive not only to ACh, (-)-nicotine and (+)-epibatidine, but also to the two insecticides. Thus redn. of the insecticide-sensitivity by the mutations G189D and G189E are attributed to an increase in negativity of loop D. Desnitro-imidacloprid (DN-IMI), an imidacloprid deriv. lacking the nitro group is a potent agonist on the G189D and G189E mutants suggesting an important role of loop D in nicotinic receptor interactions with the nitro group of nitroguanidine insecticides.

IT **138261-41-3**, Imidacloprid
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(role of loop D of .alpha.7 nicotinic acetylcholine receptor in its interaction with insecticide imidacloprid and related neonicotinoids)

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 16 OF 24 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:465957 HCAPLUS
DOCUMENT NUMBER: 133:251437
TITLE: A survey of daily intake of pesticide residue from raw foods
AUTHOR(S): Yoshikawa, Noriko; Nakase, Kanako; Hayashi, Chikako; Umino, Yukiko; Obata, Mild; Sakagawa, Rie; Semma, Masanori; Ito, Yoshio
CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, Mukogawa Women's University, Japan
SOURCE: Nippon Shokuhin Kagaku Gakkaishi (2000), 7(1), 15-21
CODEN: NSKGF4; ISSN: 1341-2094
PUBLISHER: Nippon Shokuhin Kagaku Gakkai
DOCUMENT TYPE: Journal
LANGUAGE: Japanese

AB Daily intake of 48 kinds of residual pesticides from edible part of raw foods in Osaka-Kobe area was investigated in 1998. One hundred and eleven kinds of food items were purchased from market in Nishinomiya-city. Based on the market basket survey formula for food additives in Japan, they were classified into 12 groups, i.e. cereal (items 4), potato (4), pulse (1), nut and seed (3), fish and shellfish (25), meat (4), egg (2), milk (1), fruit (22), vegetable (37), mushroom (5) and seaweed (3). Each group was homogenized after addn. of water, with exception of the fruits and vegetables, which were directly homogenized. The pesticides contained in prepd. samples were detd. by GC-MS/MS, ECD, FTD and FPD, and HPLC with UV and FL. As results, iprodione was detected in grapefruit and Chinese cabbage, imidacloprid in tomato, and tebufenpyrad in cucumber. The estd. daily intake of these pesticides were as follows: iprodione, 46 .mu.g: imidacloprid, 0.24 .mu.g: and tebufenpyrad, 1.8 .mu.g. All intakes ranged from 0.0020 to 1.6% of acceptable daily intake recommended by the Ministry of Health and Welfare, Japan or the FAO/WHO.

IT **138261-41-3**, Imidacloprid
RL: ANT (Analyte); POL (Pollutant); ANST (Analytical study); OCCU (Occurrence)
(a survey of daily intake of pesticide residue from raw foods)

L31 ANSWER 17 OF 24 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:103650 HCAPLUS
DOCUMENT NUMBER: 132:204328

TITLE: Efficacy of insecticides for longtailed mealybug control
AUTHOR(S): Martin, N. A.; Workman, P. J.
CORPORATE SOURCE: New Zealand Institute for Crop & Food Research Limited, Auckland, N. Z.
SOURCE: Proceedings of the New Zealand Plant Protection Conference (1999), 52nd, 22-24
CODEN: PNZCEJ; ISSN: 1172-0719
PUBLISHER: New Zealand Plant Protection Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Five insecticides, acephate (780 mg/L), imidacloprid (50, 100 or 150 mg/L) and 3 exptl. "org." insecticides, YR55 (1.2 g/L), YR65 (1 mL/L) and YR70 (3.6 g/L) as well as water control were applied 3 times (7-12 days apart) to pot plants of Asplenium bulbiferum (**hen** and **chicken** fern) infested with longtailed mealybugs (Pseudococcus longispinus). After 3 applications, the water-treated plants had 82% of fronds infested and a mean of 37 mealybugs on the youngest infested frond. Acephate reduced the mealybug populations to zero, while YR65 and imidacloprid reduced the infestation to 1-4% fronds infested and mean of 0.5-2.5 mealybugs on the youngest infested frond. In these treatments only old fronds were infested. YR55 and YR70 gave poor control and young fronds were infested.

IT **138261-41-3**, Imidacloprid
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(Pseudococcus longispinus control on Asplenium bulbiferum)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 18 OF 24 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:192639 HCAPLUS
DOCUMENT NUMBER: 130:263526
TITLE: Role of the .alpha. subunit of nicotinic acetylcholine receptor in the selective action of imidacloprid
AUTHOR(S): Matsuda, Kazuhiko; Buckingham, Steven D.; Freeman, John C.; Squire, Michael D.; Baylis, Howard A.; Satelle, David B.
CORPORATE SOURCE: Dep. of Agricultural Chemistry, Faculty of Agriculture, Kinki University, Nara, 631-8505, Japan
SOURCE: Pesticide Science (1999), 55(2), 211-213
CODEN: PSSCBG; ISSN: 0031-613X
PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Examn. of agonist interactions of imidacloprid on recombinant **chicken** .alpha.4.beta.2 and Drosophila SAD/**Chicken** .beta.2 hybrid receptors, expressed in Xenopus oocytes by nuclear injection of the cDNAs, indicates that imidacloprid is a partial agonist. Replacement of the .alpha.4 subunit for the Drosophila SAD subunit lowered the imidacloprid EC50 37-fold, whereas EC50s for other agonists increased 4-50 fold, suggesting that the .alpha. subunit contributes to the high affinity of insect nicotinic receptors for imidacloprid.

IT **138261-41-3**, Imidacloprid
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(role of the .alpha. subunit of nicotinic acetylcholine receptor in the selective insecticidal action of imidacloprid)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L31 ANSWER 19 OF 24 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:142304 HCAPLUS

DOCUMENT NUMBER: 130:193149
TITLE: Insecticides containing acetamiprid and pyriproxyfen against parasites on domestic animals
INVENTOR(S): Chiho, Satoshi
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11060413	A2	19990302	JP 1997-217352	19970812

PRIORITY APPLN. INFO.: JP 1997-217352 19970812

AB Title insecticides contain (E)-N1-[(6-chloro-3-pyridyl)methyl]-N2-cyano-N1-methylacetamidine (I) and pyriproxyfen (II) as active ingredients. A spraying of mouse with an EtOH soln. contg. 2.0 mg I and 0.5 mg II resulted in 82.2% lethal effect on flea.

IT **160430-64-8**, Acetamiprid
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(insecticides contg. acetamiprid and pyriproxyfen against parasites on domestic animals)

L31 ANSWER 20 OF 24 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:122146 HCAPLUS
DOCUMENT NUMBER: 128:240691
TITLE: Effects of the .alpha. subunit on imidacloprid sensitivity of recombinant nicotinic acetylcholine receptors
AUTHOR(S): Matsuda, K.; Buckingham, S. D.; Freeman, J. C.; Squire, M. D.; Baylis, H. A.; Sattelle, D. B.
CORPORATE SOURCE: The Babraham Institute Laboratory of Molecular Signalling, Department of Zoology, University of Cambridge, Cambridge, CB2 3EJ, UK
SOURCE: British Journal of Pharmacology (1998), 123(3), 518-524
CODEN: BJPCBM; ISSN: 0007-1188
PUBLISHER: Stockton Press
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Imidacloprid is a new insecticide with selective toxicity for insects over vertebrates. Recombinant (.alpha.4.beta.2) **chicken** neuronal nicotinic acetylcholine receptors (AChRs) and a hybrid nicotinic AChR formed by co-expression of a Drosophila melanogaster neuronal .alpha. subunit (SAD) with the **chicken** .beta.2 subunit were heterologously expressed in Xenopus oocytes by nuclear injection of cDNAs. The agonist actions of imidacloprid and other nicotinic AChR ligands ((+)-epibatidine, (-)-nicotine and acetylcholine) were compared on both recombinant nicotinic AChRs by use of two-electrode, voltage-clamp electrophysiol. Imidacloprid alone of the 4 agonists behaved as a partial agonist on the .alpha.4.beta.2 receptor; (+)-epibatidine, (-)-nicotine and acetylcholine were all full, or near full, agonists. Imidacloprid was also a partial agonist of the hybrid Drosophila SAD **chicken** .beta.2 receptor, as was (-)-nicotine, whereas (+)-epibatidine and acetylcholine were full agonists. The EC50 of imidacloprid was decreased by replacing the **chicken** .alpha.4 subunit with the Drosophila SAD .alpha. subunit. This .alpha. subunit substitution also resulted in an increase in the EC50 for (+)-epibatidine, (-)-nicotine and acetylcholine. Thus, the Drosophila (SAD) .alpha. subunit contributes to

the greater apparent affinity of imidacloprid for recombinant insect/vertebrate nicotinic AChRs. Imidacloprid acted as a weak antagonist of ACh-mediated responses mediated by SAD.beta.2 hybrid receptors and as a weak potentiator of ACh responses mediated by .alpha.4.beta.2 receptors. This suggests that imidacloprid has complex effects upon these recombinant receptors, detd. at least in part by the .alpha. subunit.

IT **138261-41-3**, Imidacloprid
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(effects of the .alpha. subunit on imidacloprid sensitivity of recombinant nicotinic acetylcholine receptors)

L31 ANSWER 21 OF 24 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:39215 HCAPLUS
DOCUMENT NUMBER: 126:56321
TITLE: Presence of muscarinic acetylcholine receptors in the **cattle** tick Boophilus microplus and in epithelial tissue culture cells of Chironomus tentans
AUTHOR(S): Turberg, Andreas; Schroeder, Iris; Wegener, Susanne; Londershausen, Michael
CORPORATE SOURCE: Institute for Parasitology, Bayer AG, Leverkusen, 51368, Germany
SOURCE: Pesticide Science (1996), 48(4), 389-398
CODEN: PSSCBG; ISSN: 0031-613X
PUBLISHER: Wiley
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A muscarinic acetylcholine receptor (mAChR) has been demonstrated and partially characterized in larvae of Boophilus microplus. Its properties are compared with mAChR from an epithelial cell line from Chironomus tentans. Competition studies with cholinergic ligands of different specificity revealed the muscarinic nature of the cholinergic receptors investigated in both species. In homogenates from tick larvae, specific binding sites for [34H]quinuclidinyl benzilate (QNB) with high affinity (1.cntdot.2 .+-. (0.cntdot.13) nM; Bmax 22.5 pmol mg protein-1) were detected that do not bind nicotinic compds. specifically. The estd. IC50 values for nicotine, imidacloprid and .alpha.-bungarotoxin were all in the mM range. For tick larvae, high-affinity nicotinic binding sites were detected with [3H]nicotine which could be displaced by high concns. of imidacloprid or QNB. The estd. IC50 values for nicotine, .alpha.-bungarotoxin, imidacloprid and QNB were 43(.+-.8) nM, 0.cntdot.8(.+-.0.cntdot.2) .mu.M, 2.cntdot.8(.+-.0.cntdot.6) .mu.M and 78(.+-.1.cntdot.9) .mu.M, resp. With homogenates of the non-neuronal insect cell line from C. tentans, only high-affinity binding sites for [3H]QNB were found. Muscarinic antagonists selectively displaced [3H]quinuclidinyl benzilate (QNB) binding to tick larvae homogenates. The mAChR of B. microplus preferred pirenzepine (IC50 2.cntdot.13(.+-.1.cntdot.02) .mu.M) among different subtype-specific mAChR antagonists (4-DAMP had IC50 49.cntdot.9(.+-.9.cntdot.13) .mu.M and methoctramine had IC50 121(.+-. 14.cntdot.2) .mu.M) indicating a type of binding site similar to the vertebrate M1 mAChR subtype. The tick muscarinic receptor seems to be a G-protein-coupled receptor, as concluded from the 4.cntdot.8-fold redn. in receptor affinity for binding of the muscarinic agonist oxotremorine M upon treatment with the non-hydrolysable GTP-analog .gamma.-S-GTP. Binding data for the agonists oxotremorine M (IC50 71.cntdot.3(.+-.19.cntdot.6) .mu.M) and carbachol (IC50 253(.+-.87.cntdot.1) .mu.M) parallel the biol. efficacy of these compds., in that, while oxotremorine M showed some activity against ticks, carbachol was ineffective.

IT **138261-41-3**, Imidacloprid
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study);

USES (Uses)
(binding to Boophilus microplus and Chironomus tentans homogenates)

L31 ANSWER 22 OF 24 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:30173 HCAPLUS
DOCUMENT NUMBER: 124:45689
TITLE: Agonists and antagonists of nicotinergic acetylcholine receptors as endoparasiticides.
INVENTOR(S): Mencke, Norbert; Harder, Achim; Hopkins, Terence
PATENT ASSIGNEE(S): Bayer A.-G., Germany
SOURCE: Ger. Offen., 10 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4419814	A1	19951214	DE 1994-4419814	19940607
WO 9533453	A1	19951214	WO 1995-EP2014	19950526
W: AU, BB, BG, BR, BY, CA, CN, CZ, FI, HU, JP, KR, KZ, LK, MX, NO, NZ, PL, RO, RU, SK, UA, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2192093	AA	19951214	CA 1995-2192093	19950526
AU 9527364	A1	19960104	AU 1995-27364	19950526
AU 704092	B2	19990415		
EP 764022	A1	19970326	EP 1995-922486	19950526
R: AT, BE, CH, DE, DK, ES, FR, GB, IE, IT, LI, NL				
CN 1149827	A	19970514	CN 1995-193465	19950526
BR 9507926	A	19971111	BR 1995-7926	19950526
JP 10500699	T2	19980120	JP 1995-500297	19950526
ZA 9504643	A	19960126	ZA 1995-4643	19950606
US 5712295	A	19980127	US 1996-750012	19961121

PRIORITY APPLN. INFO.: DE 1994-4419814 19940607
WO 1995-EP2014 19950526

AB The title compds., esp. imidacloprid, are endoparasiticides. Control of Haemonchus contortus in **sheep** and Hymenolepis nana in mice, are given as examples.

IT **138261-41-3**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(endoparasiticides)

L31 ANSWER 23 OF 24 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:303428 HCAPLUS
DOCUMENT NUMBER: 122:79428
TITLE: Pesticide tolerance for imidacloprid
CORPORATE SOURCE: United States Environmental Protection Agency, Washington, DC, 20460, USA
SOURCE: Federal Register (1994), 59(229), 61276-8, 30 Nov 1994
CODEN: FEREAC; ISSN: 0097-6326
PUBLISHER: Superintendent of Documents
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Under the Federal Food, Drug, and Cosmetic Act, permanent pesticide tolerances and food and feed additive regulations are established for the insecticide imidacloprid (1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine) and its metabolites in or on various commodities, including apples, potatoes, meat, eggs, and milk. Time-limited tolerances are established for cottonseed and cottonseed meal.

IT **138261-41-3**, Imidacloprid
RL: POL (Pollutant); OCCU (Occurrence)

(pesticide tolerance for food and feed)

L31 ANSWER 24 OF 24 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:506876 HCAPLUS
DOCUMENT NUMBER: 121:106876
TITLE: Pesticide tolerances for 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine
CORPORATE SOURCE: United States Environmental Protection Agency, Washington, DC, 20460, USA
SOURCE: Federal Register (1994), 59(123), 33204-5, 28 Jun 1994
CODEN: FEREAC; ISSN: 0097-6326
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Time-limited tolerances are established, under the Federal Food, Drug, and Cosmetic Act, for residues of the insecticide 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine (imidacloprid) and its metabolites in or on dried hops at 3.0 ppm, milk at 0.05 ppm, and meat, fat, and meat byproducts of **cattle**, goats, hogs, horses, and **sheep** at 0.2 ppm.
IT **138261-41-3**, Imidacloprid
RL: POL (Pollutant); OCCU (Occurrence)
(of food, stds. for)

=> d stat que l33 nos
L7 STR
L9 STR
L12 2019 SEA FILE=REGISTRY SSS FUL L7 OR L9
L13 1574 SEA FILE=HCAPLUS ABB=ON PLU=ON L12
L14 44 SEA FILE=HCAPLUS ABB=ON PLU=ON L13 AND (FLY OR FLIES)
L28 26 SEA FILE=HCAPLUS ABB=ON PLU=ON L13 AND (LIVESTOCK OR CATTLE OR SHEEP OR POULT? OR COWS OR CHICKEN OR TURKEY OR HEN OR HENS OR ROOSTER? PIG OR SOW OR BULL)
L29 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L28 AND L14
L32 9 SEA FILE=HCAPLUS ABB=ON PLU=ON L13 AND (HOG OR HORSE OR GOAT)
L33 9 SEA FILE=HCAPLUS ABB=ON PLU=ON L32 NOT L29

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L33 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:725522 HCAPLUS
DOCUMENT NUMBER: 137:231593
TITLE: Objections to tolerances established for certain pesticide chemicals
CORPORATE SOURCE: Environmental Protection Agency (EPA), USA
SOURCE: Federal Register (2002), 67(118), 41628-41635, 19 Jun 2002
CODEN: FEREAC; ISSN: 0097-6326
PUBLISHER: Superintendent of Documents
DOCUMENT TYPE: Journal
LANGUAGE: English
AB On Feb. 25, 2002, Mar. 19, 2002, and May 7, 2002, the Natural Resources Defense Council (NRDC) filed objections with EPA regarding final rules establishing tolerances under section 408 of the Federal Food, Drug, and Cosmetic Act (FFDCA), 21 U.S.C. 346a, for the following pesticides on the crops noted: 2,4-D (soybeans), halosulfuron Me (melons, asparagus), pymetrozine (cotton, undelinted seed; cotton gin byproducts; fruiting vegetables; head and stem Brassica vegetables; cucurbit vegetables; leafy

vegetables; leafy Brassica and turnip greens; hops, dried; and pecans), imidacloprid (blueberries), mepiquat (cottonseed; cotton, gin byproducts; meat byproducts of cattle, **goats, hogs, horses**, and sheep), bifenazate (apple, wet pomace; cotton, undelinted seed; cotton, gin byproducts, pome fruit group; grapes; grapes, raisins, hops, dried cones; nectarines; peaches; plums; strawberries; and milk, fat, meat, and meat byproducts of cattle, **goats, horses, hogs**, and sheep), zeta-cypermethrin (succulent, shelled peas and beans; dried, shelled peas and beans, except soybeans; soybean, seed; fruiting vegetables, except cucurbits; sorghum, grain, forage, stover; wheat, grain, forage, hay, straw; aspirated grain fractions; meat of cattle, **goats, hogs, horses**, sheep), diflubenzuron (pears). NRDC's objections concern a no. of issues under section 408 of the FFDCA including the addnl. 10X safety factor for the protection of infants and children and aggregate exposure to pesticide chem. residues. This document seeks comment on the NRDC objections.

IT **138261-41-3**, Imidacloprid
RL: ADV (Adverse effect, including toxicity); POL (Pollutant); BIOL (Biological study); OCCU (Occurrence)
(tolerances for pesticides of food and feed)

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L33 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:630888 HCAPLUS
DOCUMENT NUMBER: 137:231584
TITLE: Extension of tolerances for emergency exemptions (multiple chemicals)
CORPORATE SOURCE: Environmental Protection Agency, Office of Pesticide Programs, Environmental Protection Agency, Washington, DC, 20460, USA
SOURCE: Federal Register (2002), 67(137), 46878-46884, 17 Jul 2002
CODEN: FEREAC; ISSN: 0097-6326
PUBLISHER: Superintendent of Documents
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Time-limited tolerances are extended for the pesticides bifenazate, coumaphos, dimethenamid, diuron, emamectin benzoate, fenbuconazole, fluroxypyr 1-methylheptyl ester, hexythiazox, imidacloprid, metolachlor, myclobutanil, pendimethalin, sulfentrazone, tebuconazole, and thiabendazole. These actions are in response to EPA's granting of emergency exemptions under section 18 of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) authorizing use of these pesticides. Section 408(l)(6) of the Federal Food, Drug, and Cosmetic Act (FFDCA) requires EPA to establish a time-limited tolerance or exemption from the requirement for a tolerance for pesticide chem. residues in food that will result from the use of a pesticide under an emergency exemption granted by EPA.

IT **138261-41-3**, Imidacloprid
RL: BSU (Biological study, unclassified); POL (Pollutant); BIOL (Biological study); OCCU (Occurrence)
(tolerance for pesticides of food)

L33 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:429967 HCAPLUS
DOCUMENT NUMBER: 137:151298
TITLE: Analytical method for the determination of residues of imidacloprid, NTN 33893-5-hydroxy, and NTN 33893-olefin by HPLC with electrospray MS/MS-detection in plant- and other materials: Honey, nectar, bees, wax, corn (pollen, leaves), rape (pollen, flowers, leaves), sunflowers (pollen, flowers, leaves), tree

(leaves, flowers), **horse** chestnuts
AUTHOR(S): Schoning, R.
CORPORATE SOURCE: Crop Protection Business Group, Bayer AG, Leverkusen, 51368, Germany
SOURCE: Pflanzenschutz-Nachrichten Bayer (German Edition) (2001), 54(3), 413-450
CODEN: PNBYAT; ISSN: 0340-1723
PUBLISHER: Bayer AG
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A method was described detg. imidacloprid and the 2 major metabolites NTN 33893-5-hydroxy and NTN 33893-olefin by HPLC-MS/MS. Different plants and other materials were analyzed like rape, sunflower, corn, tree, **horse** chestnuts, nectar, honey, wax, and bees. The compds. were extd. with MeOH/ water and dichloromethane and further purified by chromatog. on silica-gel. Mean recoveries of 97, 92, and 91% were found for imidacloprid, hxdroxy-metabolite, and olefin-metabolite, resp. There was min. matrix interference. Well resolved peaks were obtained with all sample commodities at all fortification levels. The detection limit was 0.0015 mg/kg for imidacloprid and hydroxy-metabolite and 0.003 mg/kg for olefin.metabolite. An excellent repeatability was detd. for different sample materials running 5 recoveries from 0.005 to 0.1 mg/kg for all compds., simultaneously.
IT **138261-41-3**, Imidacloprid
RL: ANT (Analyte); ANST (Analytical study)
(detn. of residues of imidacloprid, NTN 33893-5-hydroxy, and NTN 33893-olefin by HPLC with electrospray MS/MS-detection)
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L33 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:354356 HCAPLUS
DOCUMENT NUMBER: 137:32290
TITLE: Acetamiprid; pesticide tolerance
CORPORATE SOURCE: Environmental Protection Agency, Office of Pesticide Programs, Environmental Protection Agency, Washington, DC, 20460, USA
SOURCE: Federal Register (2002), 67(59), 14649-14660, 27 Mar 2002
CODEN: FEREAC; ISSN: 0097-6326
PUBLISHER: Superintendent of Documents
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Tolerances for residues are established for acetamiprid N1-[(6-chloro-3-pyridyl)methyl]-N2-cyano-N1-methylacetamidine in or on citrus dried pulp, citrus fruit group, cotton gin byproducts, cotton undelinted seed, grape, fruiting vegetable group, leafy brassica vegetable group, leafy vegetable (except brassica) group, pome fruit group, and tomato paste; and tolerances for the combined residues of acetamiprid and IM-2-1 N1-[(6-chloro-3-pyridyl)methyl]-N2-cyano-acetamidine in or on fat, meat, and meat byproducts of cattle, **hog**, **horse**, **goat**, and sheep; milk; poultry eggs, fat, liver, and meat. Aventis Crop Science requested these tolerances under the Federal Food, Drug, and Cosmetic Act, as amended by the Food Quality Protection Act of 1996.
IT **160430-64-8**, Acetamiprid **190604-92-3**
RL: ADV (Adverse effect, including toxicity); POL (Pollutant); BIOL (Biological study); OCCU (Occurrence)
(tolerance for acetamiprid of food and feed)

L33 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:617863 HCAPLUS
DOCUMENT NUMBER: 135:200445

TITLE: Pharmaceutical or veterinary paste formulations containing silica and viscosity modifier
INVENTOR(S): Jun, Chen
PATENT ASSIGNEE(S): Merial Limited, UK
SOURCE: PCT Int. Appl., 64 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001060409	A1	20010823	WO 2001-EP1155	20010205
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2003007958	A1	20030109	US 2000-504741	20000216
EP 1263467	A1	20021211	EP 2001-905731	20010205
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.: US 2000-504741 A 20000216
WO 2001-EP1155 W 20010205

AB A pharmaceutical or veterinary paste formulation comprises a drug, fumed silica, a viscosity modifier, a hydrophilic carrier, optionally, an absorbent and a dye, stabilizer, surfactant, or preservative. This invention also provides for methods of using these formulations for treating various disease states as well. Thus, a paste was prepd. contg. 3-(cyclopropylmethoxy)-5,5-dimethyl-4-((4-methylsulfonyl)phenyl)-5H-furan-2-one (COX-2 inhibitor) 0.82, TiO2 0.2, MgCO3 2, fumed silica 4.25, and PEG-300 0.4% and triacetin qs.

IT **138261-41-3**, Imidacloprid
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pharmaceutical or veterinary paste formulations contg. silica and viscosity modifier)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L33 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:52145 HCAPLUS
DOCUMENT NUMBER: 135:32895
TITLE: Thiamethoxam; pesticide tolerances for emergency exemptions
CORPORATE SOURCE: Environmental Protection Agency, Office of Pesticide Programs, Environmental Protection Agency, Washington, DC, 20460, USA
SOURCE: Federal Register (2000), 65(245), 79755-79762, 20 Dec 2000
CODEN: FEREAC; ISSN: 0097-6326
PUBLISHER: Superintendent of Documents
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Time-limited tolerances are established for combined residues of thiamethoxam and its CGA-322704 metabolite in or on cotton, milk, and meat and meat byproducts of cattle, **goats**, **horses** and sheep. This action is in response to EPA's granting fo an emergency exemption under section 18 of the Federal Insecticide, Fungicide, and

Rodenticide Act authorizing use of the pesticide on cotton. This regulation establishes max. permissible levels for residues of thiamethoxam in this food commodity. These tolerances will expire and are revoked on Dec. 31, 2002.

IT **131748-59-9**, CGA 322704
RL: ADV (Adverse effect, including toxicity); POL (Pollutant); BIOL (Biological study); OCCU (Occurrence)
(tolerance for thiamethoxam of food and feed)

L33 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:43234 HCAPLUS
DOCUMENT NUMBER: 134:251392
TITLE: Thiamethoxam; Pesticide tolerance
CORPORATE SOURCE: Environmental Protection Agency, USA
SOURCE: Federal Register (2000), 65(246), 80343-80353, 21 Dec 2000
CODEN: FEREAC; ISSN: 0097-6326
PUBLISHER: Superintendent of Documents
DOCUMENT TYPE: Journal
LANGUAGE: English

AB This regulation establishes tolerances for combined residues of thiamethoxam and its metabolite in or on barley, canola, cotton, sorghum, wheat, milk, and the meat and meat byproducts of cattle, **goats**, **hogs**, **horses**, and sheep. Novartis Crop Protection, Inc. requested this tolerance under the Federal Food, Drug, and Cosmetic Act, as amended by the Food Quality Protection Act of 1996.

IT **131748-59-9**
RL: ADV (Adverse effect, including toxicity); POL (Pollutant); BIOL (Biological study); OCCU (Occurrence)
(tolerance for thiamethoxam of food and feed)

L33 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:303428 HCAPLUS
DOCUMENT NUMBER: 122:79428
TITLE: Pesticide tolerance for imidacloprid
CORPORATE SOURCE: United States Environmental Protection Agency, Washington, DC, 20460, USA
SOURCE: Federal Register (1994), 59(229), 61276-8, 30 Nov 1994
CODEN: FEREAC; ISSN: 0097-6326
PUBLISHER: Superintendent of Documents
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Under the Federal Food, Drug, and Cosmetic Act, permanent pesticide tolerances and food and feed additive regulations are established for the insecticide imidacloprid (1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine) and its metabolites in or on various commodities, including apples, potatoes, meat, eggs, and milk. Time-limited tolerances are established for cottonseed and cottonseed meal.

IT **138261-41-3**, Imidacloprid
RL: POL (Pollutant); OCCU (Occurrence)
(pesticide tolerance for food and feed)

L33 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:506876 HCAPLUS
DOCUMENT NUMBER: 121:106876
TITLE: Pesticide tolerances for 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine
CORPORATE SOURCE: United States Environmental Protection Agency, Washington, DC, 20460, USA
SOURCE: Federal Register (1994), 59(123), 33204-5, 28 Jun 1994
CODEN: FEREAC; ISSN: 0097-6326
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Time-limited tolerances are established, under the Federal Food, Drug, and Cosmetic Act, for residues of the insecticide 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine (imidacloprid) and its metabolites in or on dried hops at 3.0 ppm, milk at 0.05 ppm, and meat, fat, and meat byproducts of cattle, **goats**, **hogs**, **horses**, and sheep at 0.2 ppm.
IT **138261-41-3**, Imidacloprid
RL: POL (Pollutant); OCCU (Occurrence)
(of food, stds. for)

=> select hit rn l31 1-24;select hit rn l33 1-9
E74 THROUGH E99 ASSIGNED

E100 THROUGH E103 ASSIGNED

=> fil reg
FILE 'REGISTRY' ENTERED AT 16:06:07 ON 13 MAR 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 12 MAR 2003 HIGHEST RN 498527-50-7
DICTIONARY FILE UPDATES: 12 MAR 2003 HIGHEST RN 498527-50-7

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

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(FILE 'HCAPLUS' ENTERED AT 16:01:48 ON 13 MAR 2003)
SELECT HIT RN L31 1-24
SELECT HIT RN L33 1-9

FILE 'REGISTRY' ENTERED AT 16:06:07 ON 13 MAR 2003
L35 26 S E74-E103

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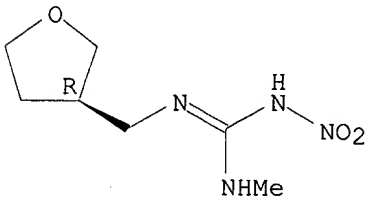
=> d ide can l35 1-26

L35 ANSWER 1 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **406466-53-3** REGISTRY
CN Guanidine, N-methyl-N'-nitro-N''-[[(3R)-tetrahydro-3-furanyl]methyl]-(9CI) (CA INDEX NAME)
FS STEREOSEARCH

MF C7 H14 N4 O3
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

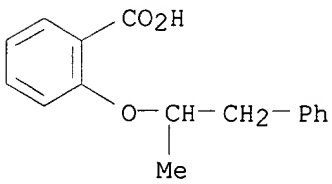
REFERENCE 1: 138:132444

REFERENCE 2: 136:274771

L35 ANSWER 2 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **366799-28-2** REGISTRY
CN Benzoic acid, 2-(1-methyl-2-phenylethoxy)-, mixt. with 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-, mixt. contg. (9CI)
MF C16 H16 O3 . C9 H10 Cl N5 O2
CI MXS
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

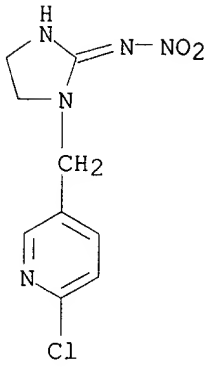
CM 1

CRN 366798-66-5
CMF C16 H16 O3



CM 2

CRN 138261-41-3
CMF C9 H10 Cl N5 O2



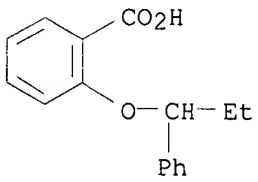
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:299970

L35 ANSWER 3 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **366799-20-4** REGISTRY
CN Benzoic acid, 2-(1-phenylpropoxy)-, mixt. with 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-, mixt. contg. (9CI)
MF C16 H16 O3 . C9 H10 Cl N5 O2
CI MXS
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

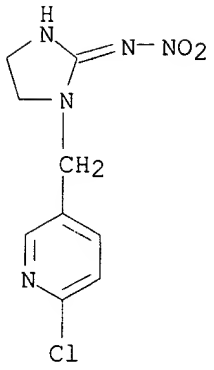
CM 1

CRN 366798-65-4
CMF C16 H16 O3



CM 2

CRN 138261-41-3
CMF C9 H10 Cl N5 O2



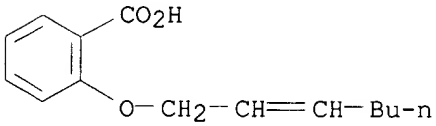
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:299970

L35 ANSWER 4 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **366799-14-6** REGISTRY
CN Benzoic acid, 2-(2-heptenyloxy)-, mixt. with 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-, mixt. contg. (9CI)
MF C14 H18 O3 . C9 H10 Cl N5 O2
CI MXS
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

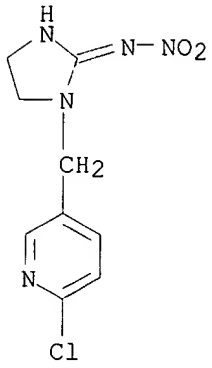
CM 1

CRN 366798-64-3
CMF C14 H18 O3



CM 2

CRN 138261-41-3
CMF C9 H10 Cl N5 O2



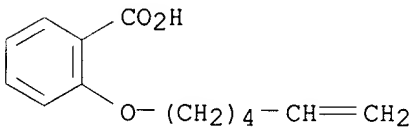
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:299970

L35 ANSWER 5 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **366799-08-8** REGISTRY
CN Benzoic acid, 2-(5-hexenyloxy)-, mixt. with 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-, mixt. contg. (9CI)
MF C13 H16 O3 . C9 H10 Cl N5 O2
CI MXS
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

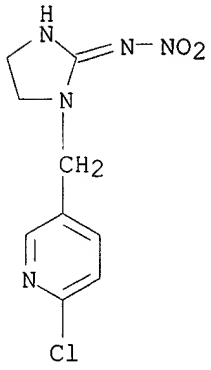
CM 1

CRN 366798-63-2
CMF C13 H16 O3



CM 2

CRN 138261-41-3
CMF C9 H10 Cl N5 O2



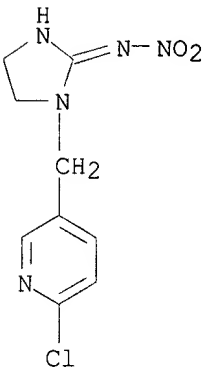
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:299970

L35 ANSWER 6 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **366799-02-2** REGISTRY
CN Benzoic acid, 2-hydroxy-, 2-hydroxyethyl ester, mixt. with 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-, mixt. contg. (9CI)
MF C9 H10 Cl N5 O2 . C9 H10 O4
CI MXS
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

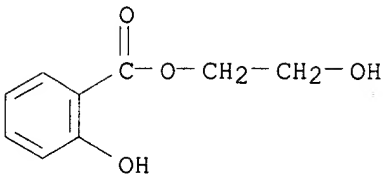
CM 1

CRN 138261-41-3
CMF C9 H10 Cl N5 O2



CM 2

CRN 87-28-5
CMF C9 H10 O4



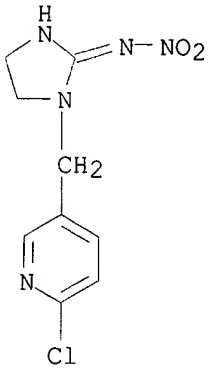
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:299970

L35 ANSWER 7 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **366798-96-1** REGISTRY
CN Benzoic acid, 2-hydroxy-, 2-phenylethyl ester, mixt. with 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-, mixt. contg. (9CI)
MF C15 H14 O3 . C9 H10 Cl N5 O2
CI MXS
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

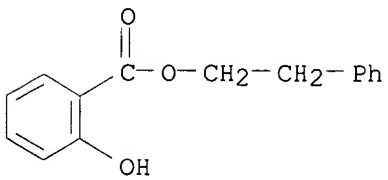
CM 1

CRN 138261-41-3
CMF C9 H10 Cl N5 O2



CM 2

CRN 87-22-9
CMF C15 H14 O3



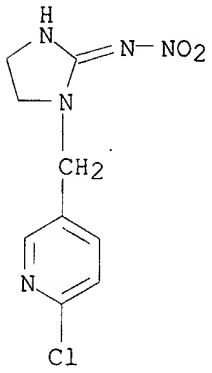
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:299970

L35 ANSWER 8 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **366798-90-5** REGISTRY
CN Benzoic acid, 2-hydroxy-, 2-methylphenyl ester, mixt. with 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-, mixt. contg. (9CI)
MF C14 H12 O3 . C9 H10 Cl N5 O2
CI MXS
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

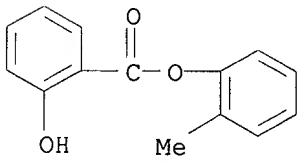
CM 1

CRN 138261-41-3
CMF C9 H10 Cl N5 O2



CM 2

CRN 617-01-6
CMF C14 H12 O3



1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

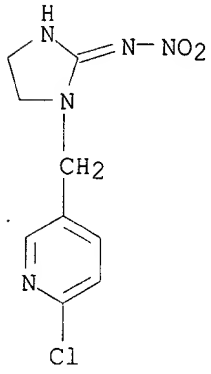
REFERENCE 1: 135:299970

L35 ANSWER 9 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **366798-84-7** REGISTRY
CN Benzoic acid, 2-hydroxy-, 4-methylphenyl ester, mixt. with 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine (9CI) (CA

INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-, mixt. contg. (9CI)
MF C14 H12 O3 . C9 H10 Cl N5 O2
CI MXS
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

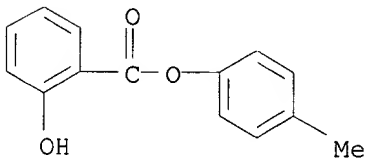
CM 1

CRN 138261-41-3
CMF C9 H10 Cl N5 O2



CM 2

CRN 607-88-5
CMF C14 H12 O3



1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

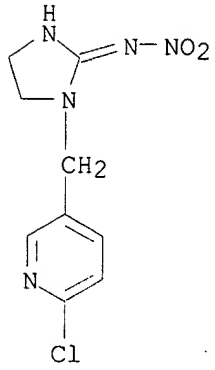
REFERENCE 1: 135:299970

L35 ANSWER 10 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **366798-78-9** REGISTRY
CN Benzoic acid, 2-hydroxy-, phenylmethyl ester, mixt. with 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-, mixt. contg. (9CI)
OTHER NAMES:
CN Benzyl salicylate-imidacloprid mixt.
MF C14 H12 O3 . C9 H10 Cl N5 O2
CI MXS
SR CA

LC STN Files: CA, CAPLUS, TOXCENTER

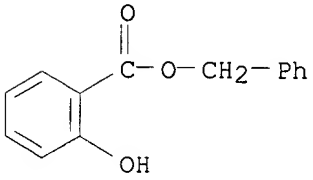
CM 1

CRN 138261-41-3
CMF C9 H10 Cl N5 O2



CM 2

CRN 118-58-1
CMF C14 H12 O3



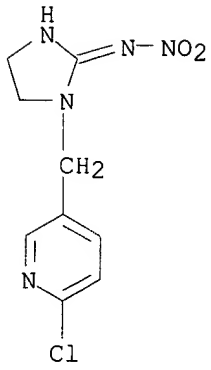
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:299970

L35 ANSWER 11 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **366798-72-3** REGISTRY
CN Benzoic acid, 2-hydroxy-, phenyl ester, mixt. with 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-, mixt. contg. (9CI)
OTHER NAMES:
CN Phenyl salicylate-imidacloprid mixt.
MF C13 H10 O3 . C9 H10 Cl N5 O2
CI MXS
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

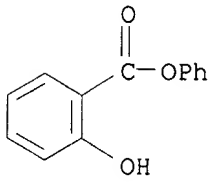
CM 1

CRN 138261-41-3
CMF C9 H10 Cl N5 O2



CM 2

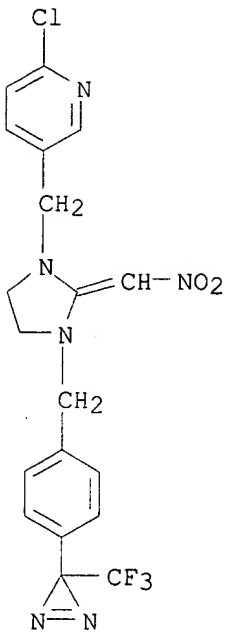
CRN 118-55-8
CMF C13 H10 O3



1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:299970

L35 ANSWER 12 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **357186-66-4** REGISTRY
CN Pyridine, 2-chloro-5-[[2-(nitromethylene)-3-[[4-[3-(trifluoromethyl)-3H-diazirin-3-yl]phenyl]methyl]-1-imidazolidinyl]methyl]- (9CI) (CA INDEX NAME)
MF C19 H16 Cl F3 N6 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

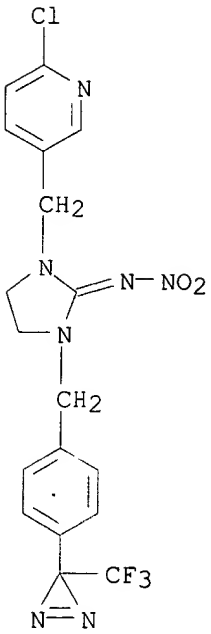


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:191645

L35 ANSWER 13 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **357186-65-3** REGISTRY
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-3-[[4-[3-(trifluoromethyl)-3H-diazirin-3-yl]phenyl]methyl]- (9CI) (CA INDEX NAME)
MF C18 H15 Cl F3 N7 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

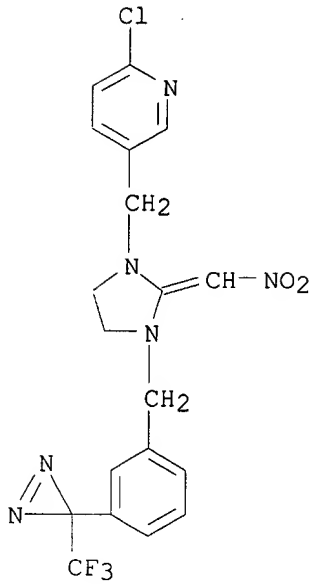


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:191645

L35 ANSWER 14 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **357186-64-2** REGISTRY
CN Pyridine, 2-chloro-5-[[2-(nitromethylene)-3-[[3-[3-(trifluoromethyl)-3H-diazirin-3-yl]phenyl]methyl]-1-imidazolidinyl]methyl]- (9CI) (CA INDEX NAME)
MF C19 H16 Cl F3 N6 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

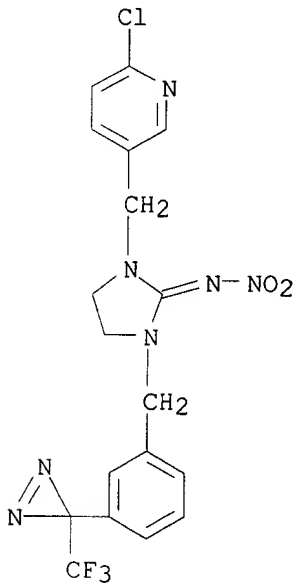


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:191645

L35 ANSWER 15 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **357186-63-1** REGISTRY
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro-3-[[3-[3-(trifluoromethyl)-3H-diazirin-3-yl]phenyl]methyl]- (9CI) (CA INDEX NAME)
MF C18 H15 Cl F3 N7 O2
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

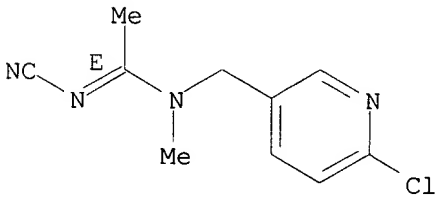
REFERENCE 1: 135:191645

L35 ANSWER 16 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **357186-08-4** REGISTRY
CN Ethanimidamide, N-[(6-chloro-3-pyridinyl)methyl]-N'-cyano-N-methyl-, (1E)-, mixt. with (4-ethoxyphenyl)[3-(4-fluoro-3-phenoxyphenyl)propyl]dimethylsilane (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Silane, (4-ethoxyphenyl)[3-(4-fluoro-3-phenoxyphenyl)propyl]dimethyl-, mixt. contg. (9CI)
OTHER NAMES:
CN Acetamiprid-silafluofen mixt.
FS STEREOSEARCH
MF C25 H29 F O2 Si . C10 H11 Cl N4
CI MXS
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

CM 1

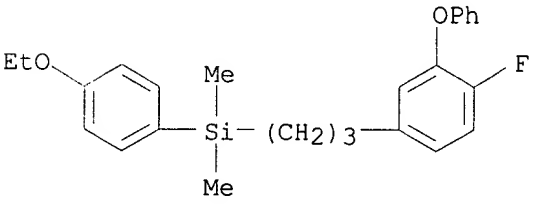
CRN 160430-64-8
CMF C10 H11 Cl N4

Double bond geometry as shown.



CM 2

CRN 105024-66-6
CMF C25 H29 F O2 Si



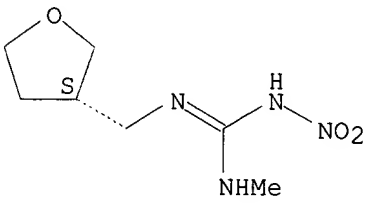
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:191669

L35 ANSWER 17 OF 26 REGISTRY COPYRIGHT 2003 ACS

RN **322639-07-6** REGISTRY
CN Guanidine, N-methyl-N'-nitro-N''-[[(3S)-tetrahydro-3-furanyl]methyl]-
(9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C7 H14 N4 O3
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1962 TO DATE)
3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

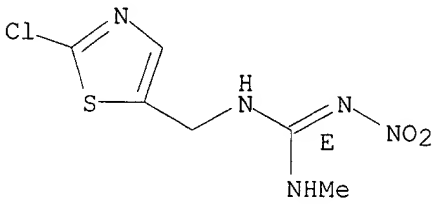
REFERENCE 1: 138:132444

REFERENCE 2: 136:274771

REFERENCE 3: 134:147489

L35 ANSWER 18 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **210880-92-5** REGISTRY
CN Guanidine, N-[(2-chloro-5-thiazolyl)methyl]-N'-methyl-N''-nitro-, [C(E)]-
(9CI) (CA INDEX NAME)
OTHER NAMES:
CN Clothianidin
CN TI 435
FS STEREOSEARCH
DR 205510-53-8
MF C6 H8 Cl N5 O2 S
CI COM
SR CA
LC STN Files: BIOSIS, CA, CAPLUS, CASREACT, CBNB, TOXCENTER, USPAT2,
USPATFULL

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

43 REFERENCES IN FILE CA (1962 TO DATE)
5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
44 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 138:149060

REFERENCE 2: 138:132444

REFERENCE 3: 138:68344

REFERENCE 4: 138:34684

REFERENCE 5: 138:20916

REFERENCE 6: 138:20885

REFERENCE 7: 138:12164

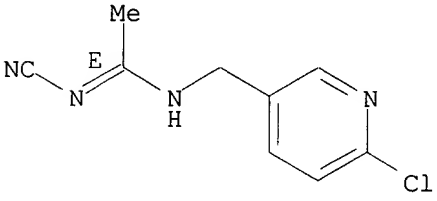
REFERENCE 8: 137:274435

REFERENCE 9: 137:274429

REFERENCE 10: 137:247079

L35 ANSWER 19 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **190604-92-3** REGISTRY
CN Ethanimidamide, N-[(6-chloro-3-pyridinyl)methyl]-N'-cyano-, (1E)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Ethanimidamide, N-[(6-chloro-3-pyridinyl)methyl]-N'-cyano-, (E)-
FS STEREOSEARCH
MF C9 H9 Cl N4
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

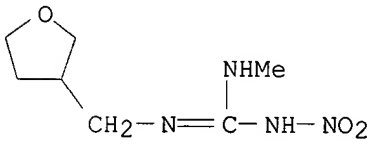
2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:32290

REFERENCE 2: 127:16644

L35 ANSWER 20 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **165252-70-0** REGISTRY
CN Guanidine, N-methyl-N'-nitro-N''-[(tetrahydro-3-furanyl)methyl]- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Dinotefuran
CN MTI 446
FS 3D CONCORD
DR 222540-72-9
MF C7 H14 N4 O3

CI COM
SR CA
LC STN Files: AGRICOLA, BIOSIS, CA, CAPLUS, CASREACT, CBNB, CIN, MEDLINE, PROMT, TOXCENTER, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

84 REFERENCES IN FILE CA (1962 TO DATE)
7 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
85 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 138:149060

REFERENCE 2: 138:149056

REFERENCE 3: 138:132444

REFERENCE 4: 138:20925

REFERENCE 5: 138:20924

REFERENCE 6: 137:347896

REFERENCE 7: 137:274435

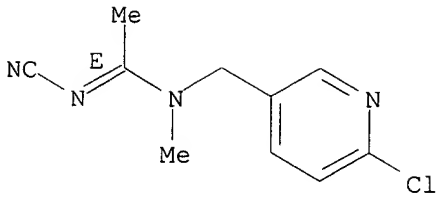
REFERENCE 8: 137:212273

REFERENCE 9: 137:121056

REFERENCE 10: 137:74811

L35 ANSWER 21 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **160430-64-8** REGISTRY
CN Ethanimidamide, N-[(6-chloro-3-pyridinyl)methyl]-N'-cyano-N-methyl-, (1E)-(9CI) (CA INDEX NAME)
OTHER NAMES:
CN Acetamiprid
CN Assail
CN Mospilan
CN NI 25
CN NI 25 (pesticide)
CN Pristine
FS STEREOSEARCH
DR 135410-20-7
MF C10 H11 Cl N4
CI COM
SR CA
LC STN Files: AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, CA, CAPLUS, CASREACT, CBNB, CHEMLIST, CIN, CSCHEM, MRCK*, PROMT, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

194 REFERENCES IN FILE CA (1962 TO DATE)
25 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
195 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 138:149060

REFERENCE 2: 138:132444

REFERENCE 3: 138:124962

REFERENCE 4: 138:118826

REFERENCE 5: 138:68344

REFERENCE 6: 138:34684

REFERENCE 7: 138:34649

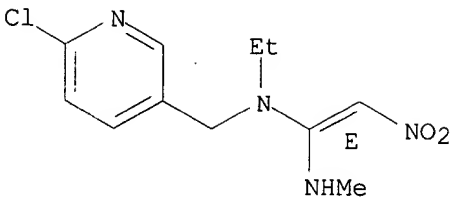
REFERENCE 8: 138:20896

REFERENCE 9: 138:12164

REFERENCE 10: 137:381261

L35 ANSWER 22 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **150824-47-8** REGISTRY
CN 1,1-Ethenediamine, N-[(6-chloro-3-pyridinyl)methyl]-N-ethyl-N'-methyl-2-nitro-, (1E)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1,1-Ethenediamine, N-[(6-chloro-3-pyridinyl)methyl]-N-ethyl-N'-methyl-2-nitro-, (E)-
OTHER NAMES:
CN (E)-Nitenpyram
CN Nitenpyram
CN TI 304
FS STEREOSEARCH
MF C11 H15 Cl N4 O2
CI COM
SR CAS Registry Services
LC STN Files: AGRICOLA, BIOBUSINESS, BIOSIS, CA, CAPLUS, CBNB, CIN, MRCK*, PROMT, RTECS*, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: WHO

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

86 REFERENCES IN FILE CA (1962 TO DATE)
13 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
88 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 138:149060

REFERENCE 2: 138:149056

REFERENCE 3: 138:132444

REFERENCE 4: 138:118826

REFERENCE 5: 138:34684

REFERENCE 6: 138:12164

REFERENCE 7: 137:364868

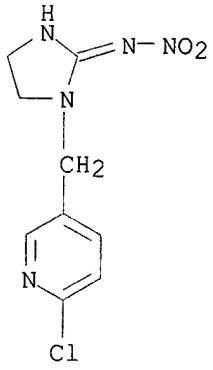
REFERENCE 8: 137:347896

REFERENCE 9: 137:334257

REFERENCE 10: 137:290159

L35 ANSWER 23 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **138261-41-3** REGISTRY
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-N-nitro- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1-[(6-Chloro-3-pyridinyl)methyl]-4,5-dihydro-N-nitro-1H-imidazol-2-amine
CN 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine
CN Admire
CN Advantage Flea Adulticide
CN BAY-NTN 33893
CN Confidor
CN Confidor 200SL
CN Confidor SL
CN CP 1
CN Gaucho
CN Imidacloprid
CN Merit
CN Merit (insecticide)
CN NTN 33893
CN NTN 33893-240FS
CN Provado
AR 105827-78-9
MF C9 H10 Cl N5 O2
CI COM
SR CAS Registry Services
LC STN Files: AGRICOLA, AQUIRE, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA,

CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN, EMBASE, MEDLINE, NIOSHTIC, PROMT, RTECS*, TOXCENTER, ULIDAT, USPAT2, USPATFULL, VETU
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1087 REFERENCES IN FILE CA (1962 TO DATE)
60 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1091 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 138:158105

REFERENCE 2: 138:149060

REFERENCE 3: 138:149056

REFERENCE 4: 138:149034

REFERENCE 5: 138:149016

REFERENCE 6: 138:132585

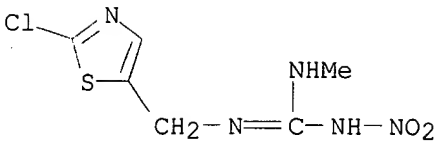
REFERENCE 7: 138:132552

REFERENCE 8: 138:132444

REFERENCE 9: 138:118823

REFERENCE 10: 138:102386

L35 ANSWER 24 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **131748-59-9** REGISTRY
CN Guanidine, N-[(2-chloro-5-thiazolyl)methyl]-N'-methyl-N''-nitro- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN CGA 322704
FS 3D CONCORD
MF C6 H8 Cl N5 O2 S
CI COM
SR CA
LC STN Files: CA, CAPLUS, CASREACT, TOXCENTER, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

46 REFERENCES IN FILE CA (1962 TO DATE)
4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
46 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:381258

REFERENCE 2: 137:368863

REFERENCE 3: 137:337879

REFERENCE 4: 135:257232

REFERENCE 5: 135:176718

REFERENCE 6: 135:61323

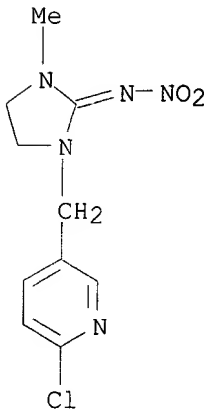
REFERENCE 7: 135:45384

REFERENCE 8: 135:32895

REFERENCE 9: 134:262335

REFERENCE 10: 134:251392

L35 ANSWER 25 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **117906-15-7** REGISTRY
CN 2-Imidazolidinimine, 1-[(6-chloro-3-pyridinyl)methyl]-3-methyl-N-nitro-
(9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C10 H12 Cl N5 O2
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, RTECS*, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

25 REFERENCES IN FILE CA (1962 TO DATE)
25 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:290159

REFERENCE 2: 136:243306

REFERENCE 3: 135:284510

REFERENCE 4: 134:158841

REFERENCE 5: 133:85574

REFERENCE 6: 133:13702

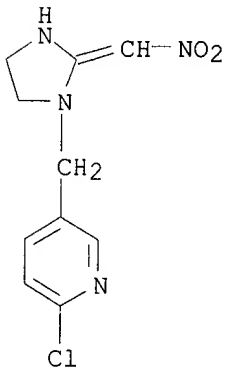
REFERENCE 7: 132:344438

REFERENCE 8: 130:277994

REFERENCE 9: 130:263504

REFERENCE 10: 130:233620

L35 ANSWER 26 OF 26 REGISTRY COPYRIGHT 2003 ACS
RN **101336-63-4** REGISTRY
CN Pyridine, 2-chloro-5-[[2-(nitromethylene)-1-imidazolidinyl]methyl]- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 6-chloro-PMNI
CN WL 134263
FS 3D CONCORD
MF C10 H11 Cl N4 O2
CI COM
SR CA
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, CHEMCATS, RTECS*, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

74 REFERENCES IN FILE CA (1962 TO DATE)
6 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
73 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:290159

REFERENCE 2: 137:121044

REFERENCE 3: 137:42943

REFERENCE 4: 135:284510

REFERENCE 5: 135:191645

REFERENCE 6: 135:30266

REFERENCE 7: 135:30264

REFERENCE 8: 133:330893

REFERENCE 9: 133:85574

REFERENCE 10: 132:344438